

WITH THE COMPLIMENTS OF THE MEDICAL
OFFICER OF HEALTH.

TWENTY-THIRD

ANNUAL REPORT

ON THE

CONDITION OF THE COMBINED
DISTRICT

OF

WEST SUSSEX,

FOR THE YEAR 1896,

BY

CHARLES KELLY, M.D., F.R.C.P.,

MEDICAL OFFICER OF HEALTH,


PROFESSOR OF HYGIENE IN KING'S COLLEGE, LONDON.

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COMBINED WEST SUSSEX DISTRICT.
GENERAL REPORT.

pp. i. et seq.

GENERAL REPORT

ON THE

HEALTH OF THE COMBINED DISTRICT

OF WEST SUSSEX.



POPULATION.

The combined District is formed at the present time by the union of eight rural with four urban districts.

The combination, when originally created in 1874, was made up of five rural and three urban districts. Midhurst joined in 1876 and Westbourne in 1880, thus making seven rural districts.

At the end of 1894 Steyning was divided into two rural portions, thus raising the number to eight. West Worthing was united to Worthing in 1890, thus reducing the number of urban districts to two, while Arundel joined in 1882, and Horsham in 1891, thus raising the number to four.

For comparative purposes, the population of all the present twelve districts is here given at each of the last four census periods, and also the number estimated as living in each area in the middle of 1896.

Rural District.	Census, 1861.	Census, 1871.	Census, 1881.	Census, 1891.	Middle of 1896.
Steyning ..	11,018	14,060	16,325	19,110	{ w. 11,300 e. 6,650
Horsham ..	17,876	19,935	15,426	16,798	18,760
Petworth ..	10,065	10,147	9,594	9,431	9,380
Thakeham ..	8,036	8,335	8,285	8,049	8,000
East Preston	6,716	7,674	8,025	8,692	9,525
Midhurst ..	12,608	13,042	13,965	14,236	14,370
Westbourne ..	6,957	7,221	7,420	7,084	6,950
Urban District.					
Worthing ..	5,805	7,413	10,976	16,606	19,200
West Worthing	54	276	689		
Littlehampton	2,350	3,266	3,926	4,452	5,460
Arundel ..	2,498	2,956	2,748	2,644	2,640
Horsham ..	—	—	6,874	8,087	8,675
Rural ..	73,276	80,414	79,040	83,400	84,935
Urban ..	10,707	13,911	25,213	31,789	35,975
Total	83,983	94,325	104,253	115,189	120,910

ii.

For the purposes of this Report the population in the middle of the undermentioned periods is taken as the basis of the calculations.

Period.	1876-80.	1881-85.	1886-90.	1891-95.	1896.
Rural Districts	69,640	80,150	82,340	84,830	84,935
Urban Districts	13,990	19,350	21,990	33,230	35,975
Total ..	83,630	99,500	104,330	118,060	120,910

The combined district, when it was originally formed in 1874, had an estimated population of 74,797 ; the estimate for the middle of 1896 is reckoned as 120,910, an increase of 46,113 persons, or 61·64 per cent.

The growth of the district is in a great measure due to an increased area whereby more persons came within the combination.

Horsham was a rural district in 1871, the urban portion not being formed until 1875 ; it was withdrawn from the combination in 1877, and it again entered it in 1891.

In 1874 there were five *rural* districts with a population estimated at 62,840 ; in 1875, part of Horsham Parish was formed into an Urban District with a population estimated at 6,500 ; in 1876, Midhurst Rural District joined the combination with 13,500 persons ; in 1876, part of Broadwater Parish with about 600 persons was transferred from the East Preston Rural District to the Worthing Urban District ; in 1880, Westbourne Rural District was included in the combination with 7,420 ; in 1880, Crawley Parish, with a population of 451, was transferred from East Grinstead Rural District to Horsham Rural District ; so that at the census of 1881 the seven rural districts contained a population of 79,040.

In October, 1890, the rural portion of Heene Parish, with 150 persons, was transferred to Worthing Urban District ; this was the only change during the decade, and the rural population at the census of 1891 was 83,400, showing an increase of 4,360 persons over 1881, or 5·5 per cent. During this period, Steyning, Horsham, East Preston, and Midhurst Districts had increased, while Petworth, Thakeham, and Westbourne Districts had decreased in population.

There were 131 parishes in these seven rural districts, excluding Heene, at the census of 1891. In seven of these parishes the increase during the decade amounted to 4,602 persons ; in the whole rural area, had Heene been left in, the increase would have been 4,510 (= 4,360 + 150). Since there had been no other change in the area, these figures show that in the remaining 124 parishes, the population had decreased by 92 ; in all these parishes the numbers were stationary or declining.

Rural District.		Parish.		Increase, 1881 to 1891.
Steyning	.. ..	Aldrington	... ..	2,083
"	.. ..	Portslade	.. ..	532
Horsham	.. ..	Ifield	.. ..	774
"	.. ..	Horsham (north)	.. ..	425
East Preston	.. ..	West Tarring	... ..	302
"	.. ..	Lyminster (south)	.. ..	142
Midhurst	.. ..	Easebourne	.. ..	344
Total increase in seven rural parishes				4,602

In the autumn of 1893, the parish of Aldrington with about 2,600 persons was transferred from the Steyning Rural District to Hove Urban District, and at the end of 1894 the parish of Cowfold with 945 persons was transferred from the Cuckfield Rural District to the Horsham Rural District.

The rapid growth of the parishes of Portslade, Southwick, West Tarring, Horsham (North), and Ifield during the past five years has raised the rural population in the middle of 1896 to 84,935, an estimated number of 1,535 in excess of those enumerated in 1891. The growth during 1895 and 1896 was very marked in all the towns along the south coast from Hove to Worthing, and also in Littlehampton. In Horsham Rural District a considerable increase is now going on, but in the other rural districts there is no marked change. Steyning District was divided at the end of 1894, so that since that year there have been eight rural districts.

In 1874, there were three *urban* districts with a population estimated at 11,957; aided by a transference of 600 persons from Broadwater to Worthing in 1876, the numbers in 1881 were ascertained to be 15,591, due chiefly to the rapid growth of Worthing, West Worthing, and Littlehampton, for at the census of 1871, the number of persons in these three areas was 10,955; the increase during the decade was 4,636, or 42·3 per cent.

Arundel Urban District, with 2,748 persons, joined the combination at the end of 1882, and the Borough of Worthing was created in 1890, whereby the two urban districts of Worthing and West Worthing were merged into one, and the rural part of Heene with 150 persons was also included. At the census of 1891, the population of the three urban districts, Worthing, Littlehampton and Arundel was ascertained to be 23,702, an increase of 8,111 over 1881, or 52·2 per cent., but 18·6 per cent. of this increase was due to the enlarged area.

At the end of December, 1891, the Horsham Urban District with a population of 8,087 joined the combination, thus raising the urban numbers to about 31,800, since which time there has been a steady growth in Worthing, Horsham, and Littlehampton, while in Arundel the population remains stationary. The urban population in the middle of 1896 is estimated at 35,975.

The changes since 1874 may be thus summarised :—

Year.		Rural.		Urban.		Total.
1874	..	62,840	..	11,957	..	74,797
1881	..	79,040	..	15,591	..	94,631
1891	..	83,400	..	23,702	..	107,102
1896	..	84,935	..	35,975	..	120,910
Increase in 1896 } over 1874 .. }		22,095	..	24,018	..	46,113
Increase per cent.		35·16	..	200·87	..	61·64
Gain by change } of area .. }		12,466	..	11,585	..	24,051
Gain per cent...		19·84	..	96·89	..	32·15
Growth of popu- } lation .. }		9,629	..	12,433	..	22,062
Gain per cent...		15·32	..	103·98	..	29·49

AREA AND HOUSES.

The number of houses and the number of occupants are here contrasted over a long term of years :—

	1861.		1891.		1891.	
	No. of Houses.	Persons to a House.	Area in Statute Acres.	No. of Houses.	Persons to a House.	
Rural Districts	14,170	5·17	331,447	16,995	4·91	
Urban Districts	2,076	5·16	5,158	6,073	5·23	
Total ..	16,246	5·17	336,605	23,068	4·99	

The *rural* districts have a much larger proportion of small houses than the towns, and the number living in each house is diminishing ; this is partly due to the declining birth-rate and partly to the rural exodus. In a portion of the Steyning District, where, as at Portslade, the population is of a semi-urban character, there were 5·23 persons to a house in 1891 ; in Petworth and Westbourne, there were, in 1891, only 4·71 and 4·67 persons in each house, and in each of these districts the population declined during the last decade ; in the rest of the rural districts, the number varied from 4·81 to 5·00 persons per house.

The *urban* districts contain many schools, hotels, lodging-houses, &c., where a large number of persons may be found under one roof ; hence the mean number occupying each house is higher than is met with in places of a distinctly rural character. Worthing, has, from these causes, a larger number than any other town in the district ; Littlehampton is more urban in character than it was thirty or forty years ago ; Arundel and Horsham belong to a more rural type.

The mean numbers living in each house are here given at each census period :—

Urban District.	1861.	1871.	1881.	1891.	Mean.
Worthing ..	5·52	5·57	5·51	5·51	5·53
Littlehampton	4·73	5·23	5·28	5·23	5·12
Arundel ..	4·73	5·31	4·98	4·80	4·95
Horsham ..	—	—	4·94	4·88	4·91

In 1891 there were 83,400 persons living in 16,995 houses distributed over 331,447 statute acres in rural districts; this gives a proportion of nearly 4 acres ($= 3·97$) to each person, or 0·25 person to each acre, and of 19·5 acres to each house. In this large area the people are very scattered and there are only seven parishes which contained more than 2,000 persons at the last census in 1891.

Portslade..	..	4,240	Westbourne	..	2,409
Petworth..	..	2,867	Horsham (N.)	..	2,421
Ifield	..	2,817	Henfield ..	..	2,006
Southwick	..	2,564			

Since 331,447 acres are equal to 517·89 square miles, there are in this area 161 persons to each square mile.

In 1891, there were 31,789 persons living in 6,073 houses distributed over 5,158 statute acres in urban districts; this gives a proportion of 0·16 acre to each person, or 6·16 persons to each acre, and of 0·85 acres to each house. Since 5,158 acres are equal to 8·06 square miles, there are in this urban area 3,944 persons to each square mile, and this ratio is rapidly increasing.

In the combined district there were in 1891, 336,605 statute acres, or 525·95 square miles, giving a proportion of 2·92 acres to each person, or at the rate of 219 persons to each square mile.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 2,876 children were registered; of these 1,464 were male, and 1,412 were female.

Table i. shows the various changes in the birth-rate during the twenty-one years 1876-96. There has been a gradual decline in the number of births, and this decline is general throughout the country.

TABLE I.—Showing the Births and Birth-rates in the twenty years, 1876-95, and in 1896.

PERIOD.	FIRST QUARTER.			SECOND QUARTER.			THIRD QUARTER.			FOURTH QUARTER.			TOTAL.			Annual birth-rate per 1,000 persons living.
	M.	F.	TL.	M.	F.	TL.	M.	F.	TL.	M.	F.	TL.	M.	F.	TL.	
1876-80 ..	1,610	1,671	3,281	1,650	1,590	3,240	1,612	1,509	3,121	1,674	1,502	3,176	6,546	6,272	12,818	30·60
1881-85 ..	1,991	1,858	3,849	1,990	1,693	3,593	1,873	1,741	3,614	1,785	1,715	3,500	7,549	7,007	14,556	29·60
1886-90 ..	1,776	1,729	3,505	1,840	1,730	3,570	1,733	1,651	3,384	1,731	1,668	3,399	7,080	6,778	13,858	26·57
1891-95 ..	1,948	1,801	3,749	1,893	1,762	3,655	1,827	1,738	3,565	1,800	1,677	3,477	7,468	6,978	14,446	25·03
1896 ..	370	338	708	384	387	771	353	375	728	357	312	669	1,464	1,412	2,876	23·78
Total ..	7,695	7,397	15,092	7,667	7,162	14,829	7,398	7,014	14,412	7,347	6,874	14,221	30,107	28,447	58,554	27·75
Per cent ..	..	..	25·77	..	..	25·33	..	..	24·63	..	..	24·27	..	..	100·00	

The births and birth-rates in each of the past six years are here shown :—

Year.	Population.	Births.		Total.	Rate per 1,000.
		Male.	Female.		
1891 ..	107,350 ..	1,444 ..	1,393 ..	2,837 ..	26·43
1892 ..	116,740 ..	1,519 ..	1,316 ..	2,835 ..	24·28
1893 ..	118,060 ..	1,551 ..	1,453 ..	3,004 ..	25·44
1894 ..	116,460 ..	1,468 ..	1,424 ..	2,892 ..	24·83
1895 ..	119,140 ..	1,486 ..	1,392 ..	2,878 ..	24·16
1896 ..	120,910 ..	1,464 ..	1,412 ..	2,876 ..	23·78

The birth-rate reached its highest point in 1879, when it was 31·12 per 1000 ; in the five-year period, 1876-80, it was 30·6 ; in 1881, when the population was only 94,860, there were 2,868 births, and there were only 8 more births in 1896 with a population of 120,910.

If the birth-rate had been as high in 1896 as it was in 1879, there would have been 3,763, instead of 2,876 births, or a difference of 887, equal to a birth-rate of 7·34 per 1,000 persons living.

Table i. shows also the number of the births in each quarter of the year ; they are most numerous in the first quarter, and they decline gradually through the rest of the year ; taking each year separately, there are slight variations, but this is the general rule.

More boys are born than girls, and the difference amounted to 1,660 in the twenty-one years 1876-96, or in the proportion of 105·9 boys to every 100 girls born. The year 1880 was the only year of the series in which the female births exceeded the male births.

The mean annual birth-rate in this combined district is here contrasted with similar figures for England and Wales.

Period.	Births.		Birth-rate	
	West Sussex.	West Sussex.	England.	
1876-80	12,818	30·60	35·4	
1881-85	14,556	29·60	33·5	
1886-90	13,858	26·57	31·4	
1891-95	14,446	25·03	30·5	
1896	2,876	23·78	29·7	
1876-96	58,554	27·75	32·6	

The diminution in the birth-rate is not confined to large towns or urban districts ; the table on page viii. shows the changes in the rate in the seven *rural* areas which form part of this combined district.

The four remaining *urban* districts of the combination give a similar result ; in their case, the annual rates are lower owing to the age and sex distribution of the population, and there is also a great excess of unmarried females.

BIRTHS AND BIRTH-RATES, 1876-96.

COMBINED DISTRICT.

Period.		Male.		Female.		Total.		Mean annual rate per 1,000.
1876-80	..	6,546	..	6,272	..	12,818	..	30·60
1881-85	..	7,549	..	7,007	..	14,556	..	29·60
1886-90	..	7,080	..	6,778	..	13,858	..	26·57
1891-95	..	7,468	..	6,978	..	14,446	..	25·03
1896	..	1,464	..	1,412	..	2,876	..	23·78
<hr/>								
1876-96	..	30,107	..	28,447	..	58,554	..	27·75
Per cent.	..	51·42	..	48·58	..	100·00		

RURAL DISTRICTS.

Period.		Male.		Female.		Total.		Mean annual rate per 1,000.
1876-80	..	5,546	..	5,329	..	10,875	..	31·19
1881-85	..	6,272	..	5,864	..	12,136	..	30·29
1886-90	..	5,678	..	5,518	..	11,196	..	27·20
1891-95	..	5,608	..	5,260	..	10,868	..	25·93
1896	..	1,071	..	1,018	..	2,089	..	24·60
<hr/>								
1876-96	..	24,175	..	22,989	..	47,164	..	28·46
Per cent.	..	51·26	..	48·74	..	100·00		

URBAN DISTRICTS.

Period.		Male.		Female.		Total.		Mean annual rate per 1,000.
1876-80	..	1,000	..	943	..	1,943	..	27·66
1881-85	..	1,277	..	1,143	..	2,420	..	26·68
1886-90	..	1,402	..	1,260	..	2,662	..	24·23
1891-95	..	1,860	..	1,718	..	3,578	..	22·66
1896	..	393	..	394	..	787	..	21·82
<hr/>								
1876-96	..	5,932	..	5,458	..	11,390	..	25·14
Per cent.	..	52·08	..	47·92	..	100·00		

In each district the birth-rates were thus recorded in the ten years 1886-95, and they are here contrasted with the rates which were met with in the five years 1876-80 ; three of the present districts had not then joined the combination, but in each of the other districts the marked decline is clearly shown.

Rural.	Rate per 1,000.		Urban.	Rate per 1,000.	
	1886-95.	1876-80.		1886-95.	1876-80.
Steyning	27·5	32·2	Worthing	23·0	27·4
Horsham	25·8	31·8	Littlehampton	21·9	30·2
Petworth	25·5	28·8	Arundel	26·2	—
Thakeham	26·3	32·5	Horsham	27·8	—
East Preston	27·4	30·6			
Midhurst	25·9	30·5			
Westbourne	28·0	—			

MARRIAGES.

The marriage-rate throughout England and Wales reached its lowest point in 1886 when there were 14·2 persons married to every 1,000 persons living ; it was highest in the five years 1830-54, a period just before the Crimean War, when the mean rate was 17·4 ; in the year 1853, it reached 17·9 per 1000 ; it was again high (= 17·3) in the three years 1872-74, just after the Franco-German War. Since this period there was a marked, but not uniform, decline down to 1886, and for the last ten years 1886-95, the mean rate has been 14·9 persons married to 1,000 persons living.

In West Sussex the rate is much lower ; the numbers for each sanitary district cannot be given, but the rate for each registration district is known, and it is here shown for the two decades 1871-80 and 1881-90.

Registration District.	Annual rate of Persons married per 1,000 living.		Marriages in the ten years.
	1871-80.	1881-90.	1881-90.
Steyning ..	12·00	11·61	3,218
Horsham ..	12·59	11·69	1,379
Petworth ..	11·33	10·49	499
Thakeham ..	12·02	11·12	454
East Preston ..	12·64	11·32	1,663
Midhurst ..	12·97	10·65	750
Westbourne ..	11·86	11·11	403

The marriage rate, if estimated by the number of marriages that take place, is half the rate of persons married per 1,000 living. The above figures show an uniform decline in the last decade over the previous one.

GENERAL MORTALITY.

During the year 1896, the deaths of 1,593 persons were registered, and of these 816 were male, and 777 were female. Estimating the population in the middle of the year at 120,910, the death-rate was equal to 13·17 per 1,000 persons living.

District.	Males.	Deaths. Females.	Total.	Death-rate in 1896.
Steyning West...	58	58	116	10·3
Steyning East ..	49	35	84	12·6
Horsham ..	105	109	214	11·4
Petworth ..	70	59	129	13·7
Thakeham ..	61	38	99	12·3
East Preston ..	78	78	156	16·4
Midhurst ..	90	83	173	12·0
Westbourne ..	44	53	97	13·6
Worthing ..	150	149	299	15·6
Littlehampton ..	41	27	68	12·4
Arundel ..	14	18	32	12·1
Horsham ..	56	70	126	14·5
Total ..	816	777	1593	13·2

There were 1,597 deaths registered in the combined district, but to this number there should be added the deaths of 3 persons in New Shoreham Workhouse which is outside the area, and from this number there should be deducted the deaths of 7 persons in Hangleton Hospital among persons not belonging to this district, leaving the corrected total at 1,593.

All deaths among visitors at Worthing or Littlehampton are included in the district where each death occurred, and all Workhouse deaths are transferred to the parish whence each inmate came.

The figures given in Table B for each district are, with the above exceptions, only transfers from one part of the combined district to another part.

The deaths and the death-rates in each of the past six years are here given :—

Year.	Population.	Male.	Deaths. Female.	Total.	Rate per 1,000.
1891 ..	107,350	951	863	1,814	16·90
1892 ..	116,740	990	946	1,936	16·58
1893 ..	118,060	961	938	1,899	16·08
1894 ..	116,460	770	752	1,522	13·07
1895 ..	119,140	891	890	1,781	14·95
1896 ..	120,910	816	777	1,593	13·17

The death-rate in England and Wales in 1896 was equal to 17·1 per 1,000 of the population, which is lower than that recorded in any previous year, excepting 1894; it was 1·7 per 1,000 lower than the rate in the ten previous years, 1886-95; the mortality is much higher in large towns than in country districts.

A comparison is here made between the rates prevailing in West Sussex and in England and Wales during the twenty years 1876-95 and in 1896.

Period.	West Sussex.	Town Districts.	Country Districts.	England.
1876-80 ..	15·51	22·4	21·2	20·8
1881-85 ..	14·61	20·4	17·5	19·4
1886-90 ..	14·48	20·0	17·1	18·9
1891-95 ..	15·52	19·5	17·3	18·7
1896 ..	13·17	18·0	15·3	17·1

DEATHS AND DEATH-RATES, 1876-96.

COMBINED DISTRICT.

Period.		Male.		Female.		Total.		Annual rate per 1,000.
1876-80	..	3,440	..	3,056	..	6,496	..	15·51
1881-85	..	3,779	..	3,416	..	7,195	..	14·61
1886-90	..	3,955	..	3,595	..	7,550	..	14·48
1891-95	..	4,563	..	4,389	..	8,952	..	15·52
1896	..	816	..	777	..	1,593	..	13·17
<hr/>								
1876-96	..	16,553	..	15,233	..	31,786	..	14·94
Per cent.	..	52·08	..	47·92	..	100·00	..	—

RURAL DISTRICTS.

Period.		Male.		Female.		Total.		Annual rate per 1,000.
1876-80	..	2,906	..	2,482	..	5,388	..	15·46
1881-85	..	3,121	..	2,753	..	5,874	..	14·65
1886-90	..	3,112	..	2,727	..	5,839	..	14·19
1891-95	..	3,311	..	2,977	..	6,288	..	14·99
1896	..	555	..	513	..	1,068	..	12·57
<hr/>								
1876-96	..	13,005		11,452		24,457		14·71
Per cent	..	53·18		46·82		100·00		

URBAN DISTRICTS.

Period.		Male.		Female.		Total.		Annual rate per 1,000.
1876-80	..	534	..	574	..	1,108	..	15·69
1881-85	..	658	..	663	..	1,321	..	14·53
1886-90	..	843	..	868	..	1,711	..	15·59
1891-95	..	1,252	..	1,412	..	2,664	..	17·03
1896	..	261	..	264	..	525	..	14·59
<hr/>								
1876-96	..	3,548	..	3,781	..	7,329	..	15·66
Per cent.	..	48·41	..	51·59		100·00		

The table on page xi. shows that there are more male than female deaths ; that in the two five-year periods, 1881-85 and 1886-90, the death-rate was lower than in the preceding or in the later period, and that in the year 1896, the rate was 1·77 below the mean.

It may then be accepted as a fact that after including the deaths of all visitors within the district, and distributing the deaths in the different Workhouses amongst the various parishes whence each inmate came, the death-rate in West Sussex is equal to 15·0 per 1,000 persons living. In the twenty years, 1876-95, it was at the rate of 15·03, but the low rate in 1896 reduced the mean mortality to 14·94 per 1,000. No doubt there are a few deaths outside this district of persons who die when away from home, but by adding the deaths of visitors, amounting on an average to 42 per year, any loss from this source is more than made up. The death-rate is, therefore, a maximum rate.

By breaking up this table into portions, and by separating the rural from the urban districts, it will be seen that the rural rate for the whole term of years is 0·95 per 1,000 lower than the urban rate ; in 1876-80, the mortality in each portion was very nearly equal ; in 1880-85, it was actually higher by a slight amount in the rural than in the urban portion ; in the next two five-year periods, the rural mortality remained low, while the urban mortality rose.

The rural rates fluctuate much less than the urban rates, but in either case the mortality is low.

The numbers living in each area are not numerous, and if any single year were taken the rate might appear unduly favourable, or the reverse ; by examining the returns for such a long period as twenty-one years, all such variations are checked, and a good idea can be obtained of the health of a district so far as statistics can reveal it.

In a small district, it is easy to pick out a period when the rate of mortality is very low, but the publication of such a rate is quite unfair, as it gives no idea of the general state of the area and it can only further mislead the ignorant ; thus weekly or monthly returns for small towns are of small value, and the more so, as they are but seldom used unless the facts are favourable.

These variations disappear when the district is of large size, or when the length of time over which the survey extends is sufficient for the purpose. When a small area is taken, or when the period chosen is too short, the result is a mass of figures, not of statistics ; statistics are figures orderly arranged.

Much harm has been done in past years by those who have led the public to believe too much in low death-rates, when the mere fact of a

district having such rates ought rather to make one suspect that some source of fallacy must be present. Such sources are to be found readily enough, and they are most frequent in those places which owe some of their prosperity to the common belief.

If a town has a Workhouse outside its boundaries where many aged persons die who belong to this town, such deaths ought to be added to those which occur within the district ; if this be not done, the mortality will appear too low. With this object in view, some authorities have advocated the erection of isolation hospitals outside their limits, lest any deaths there might be recorded in addition to those actually taking place within their area.

If, on the other hand, there are many schools in a district, the mortality may appear unduly low, as from this cause there will be an excessive proportion of young persons who yield but a small number of deaths. Such a low rate may be correct enough for any given district, but the place cannot be with any accuracy compared with another district in which the distribution of the population is different.

It is always well to mistrust a very low death-rate, and careful inquiry should be made into the age and sex distribution of the population before coming to a conclusion.

In contrasting the figures year by year for the same district the comparison may be made readily and correctly, but when other districts are contrasted, one with the other, such a comparison may be fallacious unless due allowance be made for age and sex distribution. The male death-rate is rather higher than the female death-rate, and therefore in places where there is an excess of either sex, the mortality may be slightly raised or lowered accordingly. Age has a more important influence. In rural parishes, where young adults leave for large centres of population, and there is an accumulation or excess of aged persons, the mortality must be raised, because in young adult life the death-rate is low, while it is very high in advanced years.

The distribution of age and sex may raise or lower the mortality as much as 2·0 per 1,000 persons living, irrespective of sanitary conditions.

The mean death-rate in England and Wales for the decade 1881-90 was 19·15 per 1,000, but if the population had been distributed, as regards age and sex, as it was in West Sussex during the same period, the rate would have been raised to 20·769 per 1,000. $19\cdot15$ divided by $20\cdot769 = \cdot92205$ which is the factor for correction for West Sussex. In a similar way the factor for each district can be obtained. The following table shows the result based on the mean death-rate during the decade 1881-90.

		Factor.	Recorded Death-rate.	Corrected Death-rate.
	England and Wales ..	1·00000	19·15	19·15
	West Sussex	·92205	14·37	13·23
	Four Urban Districts ..	·97490	14·38	14·02
	Seven Rural Districts ..	·90355	14·35	12·97
4 Urban.	{ Arundel	·92133	18·53	17·07
	{ Horsham	·94223	17·23	16·24
	{ Worthing	·99300	15·05	14·94
	{ Littlehampton ..	·99781	13·36	13·34
7 Rural.	{ East Preston ..	·85361	13·69	11·69
	{ Westbourne ..	·85571	14·24	12·11
	{ Thakeham ..	·86429	14·00	12·10
	{ Petworth	·87329	15·75	13·96
	{ Midhurst	·91476	14·48	13·25
	{ Horsham	·93960	13·37	12·56
	{ Steyning (West & East)	·95454	14·15	13·51

The factor for correction is the figure by which the recorded death should be multiplied so as to allow for the variations of age and sex distribution, and the result gives the corrected death-rate.

In nearly all large towns the factor is above unity, and then the corrected rates must be higher than the recorded rates.

In rural districts, opposite conditions are met with, and the corrected rates are lower than those recorded.

An examination of the accompanying tables shows that in rural districts the male deaths are much in excess of the female deaths, while, to a rather less extent, the figures are reversed in the urban districts.

This is due in great measure to the difference in the two populations as regards age and sex. Tables ii. and iii. give the number of persons living in the combined area at each census in 1881 and 1891 and also in rural and urban areas.

In each period the males are most numerous in rural districts, and females predominate in urban districts, while in England and Wales the numbers are almost exactly the reverse, for all ages, of those living in West Sussex.

For the purposes of comparison the figures are worked out to show the proportion living in each area at six groups of ages out of 100,000 persons.

The main facts for 1891 for the totals at all ages are here summarised :

	Rural.	Urban.	West Sussex.	England and Wales.
Male ..	50,466 ..	43,924 ..	48,661 ..	48,454
Female ..	49,534 ..	56,076 ..	51,339 ..	51,546
Persons..	100,000	100,000	100,000	100,000

A similar table for 1881 shows that at that time there was a greater divergence in rural districts, and less divergence in urban districts than in 1891.

More males die in rural areas because there is a larger male population ; more females die in urban areas because there is a larger female population ; but this explanation does not wholly account for the variation ; the male death-rate, for various reasons, is always higher than the female death-rate, but not to the extent as shown in the above tables, and this is found by giving the ratio of male deaths to 1,000 male persons living, and of female deaths to 1,000 female persons living ; it is still better seen if a similar ratio is shown at different groups of ages of either sex.

For this purpose, it is best to take a census year, or three or five years of which the census year forms the centre, as at such a period the number of persons living can be more correctly given than at any intercensal period.

Table iv. shows the death-rate for males and females respectively at twelve groups of ages in the census year, 1881 ; in the three-year period, 1890-92, of which a census year forms the centre ; also the rate in England and Wales for 1891, for each sex.

The table should be read thus:—Out of every thousand males living between 45 and 55 years of age, 15·08 died in 1890, and so on for each group, &c.

GAIN BY EXCESS OF BIRTHS OVER DEATHS.

In the combined district there were 58,554 births and 31,786 deaths in the twenty-one years, 1876-96, so that the increase of population from this source was 26,768.

RURAL.

	Male.	Female.	Total.
Births ..	24,175 ..	22,989 ..	47,164
Deaths ..	13,005 ..	11,452 ..	24,457
Excess of Births	11,170 ..	11,537 ..	22,707

TABLE II.—DISTRIBUTION OF POPULATION IN 1881.

	0 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and over.	Total.
WEST SUSSEX—							
Male ..	6,786	12,443	8,635	11,353	7,664	3,060	49,921
Female ..	6,803	11,852	8,235	12,317	7,722	3,150	50,079
Persons ..	13,589	24,295	16,870	23,670	15,386	6,210	100,000
7 RURAL DISTRICTS—							
Male ..	6,936	12,566	8,796	11,546	8,046	3,241	51,131
Female ..	6,946	11,922	7,464	11,758	7,622	3,087	48,869
Persons ..	13,882	24,488	16,260	23,304	15,668	6,328	100,000
4 URBAN DISTRICTS—							
Male ..	6,140	11,914	7,939	10,524	5,911	2,280	44,708
Female ..	6,189	11,249	11,560	14,723	8,152	3,419	55,292
Persons ..	12,329	23,163	19,499	25,247	14,063	5,699	100,000
ENGLAND AND WALES—							
Male ..	6,767	11,437	9,195	12,472	6,760	2,062	48,663
Female ..	6,788	11,461	9,605	13,455	7,514	2,514	51,337
Persons ..	13,555	22,898	18,800	25,927	14,274	4,576	100,000

Males	62,081	62,083	61,770	61,554	57,116	33,220	20,435	27,265	25,515	23,321	22,240	18,655	15,965	13,140	11,520	6,185	2,710	955	39	1
Females	60,113	61,323	57,871	39,933	37,993	33,494	32,200	29,560	27,357	24,923	22,280	18,885	15,775	12,227	9,990	7,220	2,550	1,060	44	3
	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	90 to 95	95 to 100

Distribution of Population

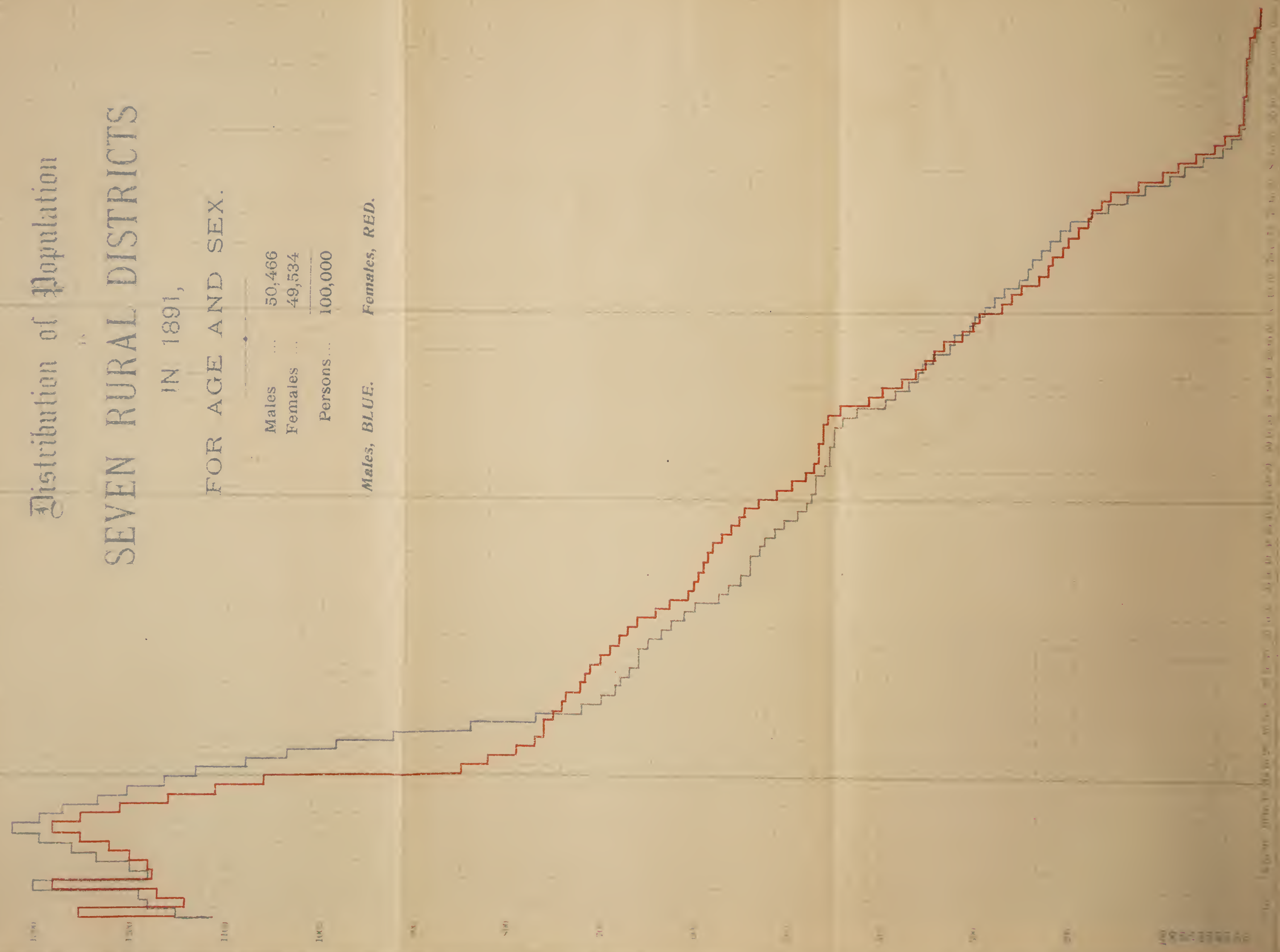
SEVEN RURAL DISTRICTS

IN 1891,

FOR AGE AND SEX.

Males ... 50,466
 Females ... 49,534
 Persons ... 100,000

Males, BLUE. Females, RED.



5,472	5,612	5,850	4,903	2,945	2,873	2,450	2,275	2,143	1,889	1,610	1,158	950	847	725	485	165	42	24
4,900	5,431	5,950	6,371	6,281	4,960	4,199	3,837	3,305	2,954	2,540	2,200	1,720	1,410	1,150	803	305	151	12
0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	90 to 95

Distribution of Population

WORTHING URBAN DISTRICT

IN 1891,
FOR AGE AND SEX.

Males ... 41,419
Females ... 58,581
Persons.. 100,000

Males, BLUE.
Females, RED.

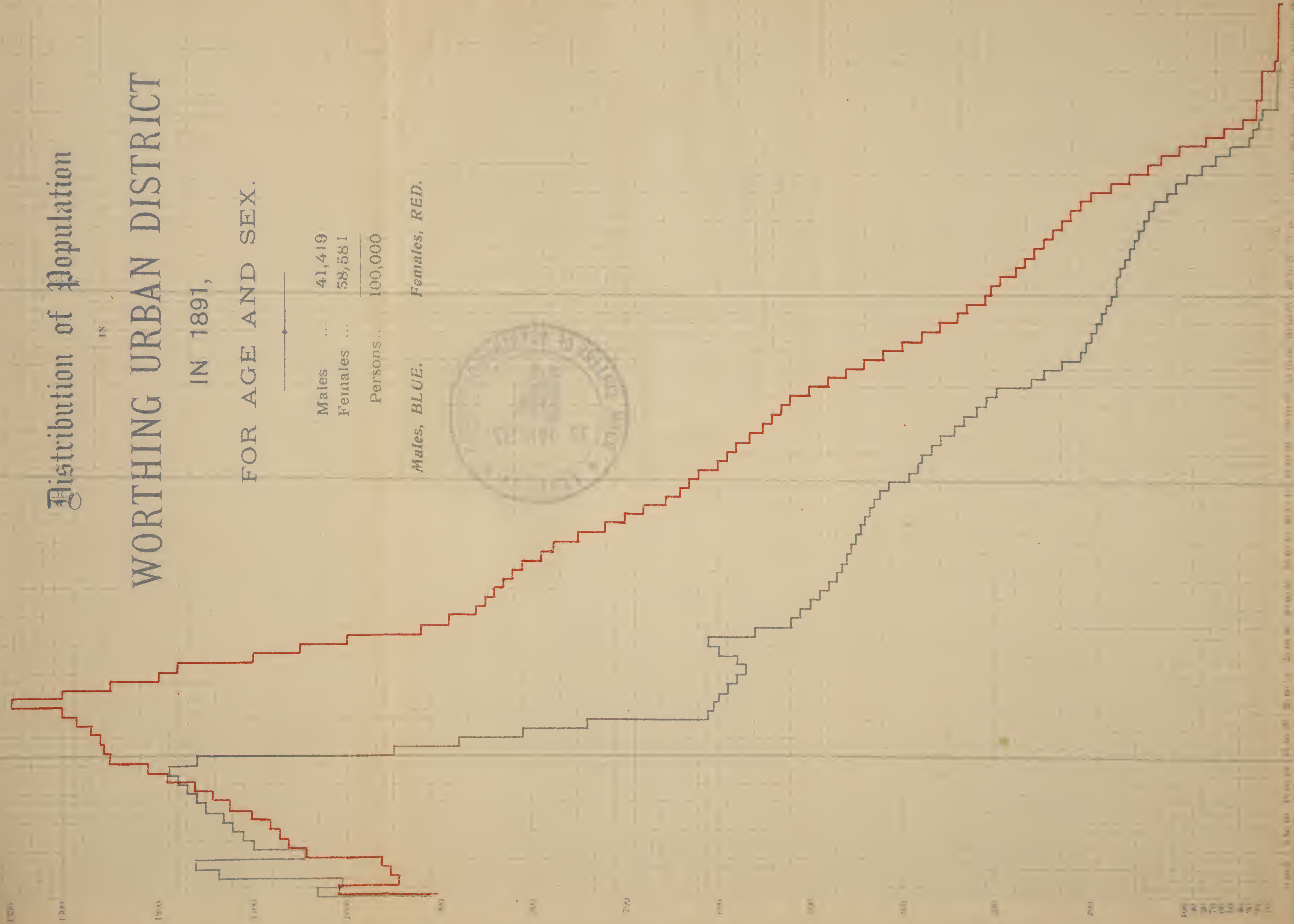


TABLE III.—DISTRIBUTION OF POPULATION IN 1891.

	0 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and over.	Total.
WEST SUSSEX—							
Male	5,842	12,223	8,537	11,336	7,544	3,179	48,661
Female	5,828	11,797	8,727	13,097	8,424	3,466	51,339
Persons	11,670	24,020	17,264	24,433	15,968	6,645	100,000
7 RURAL DISTRICTS—							
Male	6,000	12,473	8,870	11,605	8,011	3,507	50,466
Female	6,013	11,920	7,699	12,401	8,166	3,335	49,534
Persons	12,013	24,393	16,569	24,006	16,177	6,842	100,000
4 URBAN DISTRICTS—							
Male	5,425	11,563	7,666	10,630	6,318	2,322	43,924
Female	5,342	11,476	11,425	14,920	9,104	3,809	56,076
Persons	10,767	23,039	19,091	25,550	15,422	6,131	100,000
ENGLAND AND WALES—							
Male	6,094	11,393	9,353	12,758	6,765	2,091	48,454
Female	6,158	11,428	9,947	13,814	7,558	2,641	51,546
Persons	12,252	22,821	19,300	26,572	14,323	4,732	100,000

TABLE IV.—Showing the death-rates in the Rural Districts of West Sussex at twelve groups of ages in 1881 and in 1890-92.

MALE.													
PERIOD.	All ages.	0 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and over.
1881 ..	14.95	30.84	3.28	1.69	2.45	6.98	7.27	6.52	13.39	23.17	48.89	118.22	397.59
1890 ..	15.10	31.12	3.44	1.56	4.44	4.54	5.10	6.66	15.08	21.87	52.84	140.26	243.28
1891 ..	17.11	44.36	3.04	3.11	3.25	4.20	6.78	5.03	9.74	24.95	52.09	158.91	379.31
1892 ..	17.58	36.58	5.11	2.52	2.55	4.17	6.57	5.93	16.80	31.14	59.65	150.63	333.33
Mean, 1890-92	16.60	37.35	3.86	2.39	3.41	4.30	6.15	5.87	13.87	25.98	54.86	149.93	318.64
England, 1891	21.5	64.5	4.7	2.6	4.2	5.7	7.9	13.5	22.4	41.1	81.2	168.0	327.1
FEMALE.													
1881 ..	12.59	20.04	3.59	2.02	2.61	4.95	6.37	8.20	6.07	26.90	50.81	97.56	190.91
1890 ..	12.27	22.40	2.74	1.68	4.23	3.90	4.13	6.96	7.68	17.04	48.37	106.83	286.88
1891 ..	14.91	30.11	2.34	2.07	3.30	5.18	6.09	7.77	9.43	24.93	47.05	127.31	332.43
1892 ..	15.62	33.80	3.70	2.06	4.18	8.37	5.71	7.11	10.40	32.07	53.76	130.86	268.29
Mean, 1890-92	14.26	28.77	2.92	1.93	3.90	5.81	5.31	7.28	9.17	24.68	49.72	121.66	295.86
England, 1891	19.0	53.6	4.7	2.9	4.3	5.2	7.1	11.1	17.2	33.4	70.6	148.3	300.6

In 1876-80, before the birth-rate began to decline, the death-rate was less than half the birth-rate, or 15·46 to 31·19; this ratio in 1891-95 was 14·99 to 25·93.

URBAN.

		Male.		Female.		Total.
Births	..	5,932	..	5,458	..	11,390
Deaths	..	3,548	..	3,781	..	7,329
Excess of Births		2,384	..	1,677	..	4,061

In 1876-80, when the birth-rate was 27·66, the death-rate was 15·69, but in 1891-95 the ratio was 22·66 births to 17·03 deaths.

AGE AT DEATH IN RURAL DISTRICTS.

The distribution of deaths in rural districts for the fifteen years 1881-95 shows that out of 18,001 deaths, 6,398 or more than one-third, took place among persons aged sixty-five years and upwards. The numbers for comparison are given per 1,000 for each rural district; the mean for urban districts shows that rather less than one-third die at 65 years and upwards. Steyning District, which is partly urban in type, is lowest at advanced ages. These are not death-rates, but simply the ratio per 1,000 of those dying at different groups of ages. It is another way of showing the excessive number of aged persons living in rural, as compared with urban, districts.

Rural District.	All ages.	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and over.
Steyning	.. 1,000	.. 208	.. 111	.. 48	.. 48	.. 280	.. 305
Horsham	.. 1,000	.. 178	.. 89	.. 60	.. 52	.. 276	.. 345
Petworth	.. 1,000	.. 141	.. 68	.. 45	.. 46	.. 294	.. 406
Thakeham	.. 1,000	.. 141	.. 85	.. 53	.. 50	.. 293	.. 378
East Preston	.. 1,000	.. 161	.. 92	.. 60	.. 54	.. 281	.. 352
Midhurst	.. 1,000	.. 161	.. 92	.. 50	.. 53	.. 279	.. 365
Westbourne	.. 1,000	.. 173	.. 82	.. 55	.. 43	.. 261	.. 386
Rural Mean, 1881-95.	} 1,000	.. 171	.. 91	.. 52	.. 50	.. 281	.. 355
Urban Mean, 1886-95.	} 1,000	.. 156	.. 100	.. 51	.. 62	.. 316	.. 315

INFLUENCE OF SEASON ON MORTALITY.

Table V. shows the deaths taking place in each month in 1876-95, and in 1896.

Deaths are more frequent in the cold months than in the warm months of the year ; hence the death-rate is highest in the first quarter, it declines through the second quarter, reaching its lowest point in the third quarter, and again rising as winter advances.

In each quarter of the twenty years 1876-95, the deaths were thus recorded :—

Period.		1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
1876-80	..	1,864	1,645	1,468	1,519	6,496
1881-85	..	1,978	1,790	1,686	1,741	7,195
1886-90	..	2,237	1,829	1,664	1,820	7,550
1891-95	..	2,893	2,113	1,946	2,000	8,952
1876-95	..	8,972	7,377	6,764	7,080	30,193
Per cent ..		29·71	24·43	22·41	23·45	100·00
1896	..	429	347	380	437	1,593

More persons die in cold, than in hot weather ; this may be more readily seen by dividing the year into three parts according to temperature :—

	Deaths	Per cent.
Cold.—December to March ..	12,154	38·2
Moderate.—April, May, Oct., Nov.	10,202	32·1
Hot.—June to September ..	9,430	29·7
Total	31,786	100·0

INFANT MORTALITY.

During the year 1896 there were 283 deaths of infants under one year of age, out of a total of 1,593 deaths from all causes ; of these 164 were male and 119 were female.

There were 2,876 births, so that the infant mortality, as measured by the number of deaths under one year of age to every 1,000 children born, was 98·4 against a rate of 112, 84, 77, 77, 97, 113, 106, 102, 84, and 105 in the ten preceding years, or a mean rate of 95·7 per 1,000 births.

Throughout England and Wales the rate of infant mortality in 1896 was equal to 148 per 1,000, the mean proportion in the preceding ten years having been 148. In large towns the infantile death-rate is very much higher.

TABLE V.—Showing the Deaths in each Month in the twenty years, 1876-95, and in the year 1896.

Month.	1876-80.	1881-85.	1886-90.	1891-95.	Mean 1876-95.	1896.
January	632	683	677	1,110	155.1	154
February	633	619	723	850	141.2	135
March	599	676	837	933	152.2	140
April	601	624	693	788	135.3	127
May	550	603	640	700	124.6	112
June	494	563	496	625	108.9	108
July	433	533	540	651	107.8	116
August	511	589	560	659	115.9	137
September	524	564	564	636	114.4	127
October	473	535	588	647	112.1	118
November	479	590	562	618	112.4	154
December	567	616	670	735	129.4	165
Total	6,496	7,195	7,550	8,952	1,509.6	1,593

In each district the rate of infant mortality during the past five years is here given :—

	District.	1892.	1893.	1894.	1895.	1896.	Mean.
Rural.	{ Steyning....	131	.. 113	.. 83	W. 101	.. 70	.. 85.5
					E. 108	.. 148	.. 128.0
	Horsham ..	122	.. 94	.. 82	.. 86	.. 106	.. 99.0
	Petworth ..	84	.. 68	.. 57	.. 119	.. 94	.. 84.4
	Thakeham ..	86	.. 87	.. 85	.. 76	.. 70	.. 80.8
	East Preston	93	.. 88	.. 78	.. 108	.. 95	.. 92.4
	Midhurst ..	107	.. 71	.. 97	.. 92	.. 95	.. 92.4
Westbourne	108	.. 142	.. 75	.. 151	.. 56	.. 106.4	
Urban.	{ Worthing ..	78	.. 145	.. 115	.. 135	.. 136	.. 121.8
	{ Littlehampton	111	.. 48	.. 81	.. 118	.. 93	.. 99.2
	{ Arundel	58	.. 115	.. 79	.. 39	.. 104	.. 79.0
	{ Horsham ..	123	.. 136	.. 118	.. 109	.. 79	.. 113.0
Whole District		106	102	84	105	98	99.0

It will thus be seen that the rate of infant mortality is much higher in the urban than in the rural districts. The death-rate of male infants is much higher than that of female infants; it is true that more boys than girls are born, the ratio being 103 male births to 97 female births in the twenty years, 1876-95, or in the proportion of 106 boys to 100 girls, but this will not account for the great disparity in the death-rates.

Under one year of life there is a great preponderance of male deaths, and a similar excess, but in a much diminished degree, may be noticed up to five years of age, after which period the numbers are more nearly equal.

In the seven years 1890-96 there were 19,950 births and 2,013 deaths under one year of age; thus the infant mortality was at the rate of 101 deaths to every 1,000 births; the ratio is very different in rural and urban districts.

District.	Births.			Deaths under 1 year.			Rate per 1,000 births.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Rural	7,716	7,337	15,053	870	585	1,455	113	80	97
Urban	2,545	2,352	4,897	305	253	558	120	107	114
Total	10,261	9,689	19,950	1,175	838	2,013	114	86	101

This disparity is soon lost after the first year of life, and after five years of age the numbers are much more equal; the male deaths show an excess because there are more boys than girls in the population.

1890-96.	1 to 2.		2 to 5.		5 to 10	
	M.	F.	M.	F.	M.	F.
Rural deaths ..	187	180	.. 168	158	.. 142	131
Urban deaths ..	86	85	.. 87	88	.. 59	64
Total deaths ..	273	265	.. 255	246	.. 201	195

ZYMOTIC MORTALITY.

Out of 1,593 deaths from all causes in 1896, 195 were due to this class of disorders, or 1·61 per 1,000 persons living.

In England and Wales the rate from only the seven principal zymotic disorders was equal to 2·18 per 1,000 persons living, against 2·22, 2·14, 1·90, 2·00, 2·52, 1·81, and 2·17 in the seven preceding years.

There were in this district 93 deaths from diseases in 1896, which are notifiable, and 102 deaths in the other class, where the number of cases cannot be obtained.

Notifiable.				Not-notifiable.			
Diseases.			Deaths.	Diseases.			Deaths.
Small Pox	..	..	2	Measles	..	..	32
Scarlatina	..	..	2	Whooping Cough	..		49
Diphtheria	..	..	68	Diarrhoea and Dysentery			16
Membranous Croup	..		3	Rheumatic Fever	..		5
Fever	{ Typhus	..	..		
	{ Enteric	..	..		
	{ Continued	..	..		
	{ Relapsing	..	..		
	{ Puerperal	..	..		
Cholera	..	..	..	
Erysipelas	..	..	2				
Total			93				102

There were 16 deaths from Influenza.

The Infectious Disease (Notification) Act, 1889, came into operation at various periods in the years 1890 and 1891, except in Horsham Urban District where it came into operation on July 8th, 1896.

In each quarter of 1896 the new cases of Infectious Disease were thus registered :—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Year.
Small Pox	5	22	22	1	50
Scarlatina	33	20	42	37	132
Diphtheria	107	43	76	67	293
Membranous Croup ..	1	—	1	2	4
Enteric Fever ..	13	16	36	19	84
Puerperal Fever ..	1	2	—	1	4
Erysipelas	20	15	21	17	73
Total ..	180	118	198	144	640
Urban Cases ..	77	54	75	56	262
Rural Cases ..	103	64	123	88	378

There were no cases of typhus, continued, or puerperal fever, or of cholera.

The following tables give the details of the incidence of infectious disease in various districts over a period extending, in most instances, over twenty years.

One object is to bring out clearly the incidence of these disorders in rural districts, where the population is distributed over a large area, and to contrast the results with those which obtain in the urban districts.

The size of the area, the few changes that take place among the people from year to year, and the length of time over which the survey is taken enable one to obtain a fair view of the general distribution of the chief catching disorders, so far as it can be shown by statistics.

The Infectious Disease (Notification) Act, 1889, came into operation at varying dates in the years 1890 and 1891, so that the statistics for 1890 are not given, and those for 1891 are incomplete ; the next five years give complete results for all the rural areas, and for Worthing, Littlehampton, and Arundel Urban Districts, and since the Act came into force in Horsham Urban District on July 8th, 1896, the figures in future years will be correct for the whole district.

In each district this most useful Act came into operation on the following dates :—

Steyning (West)	May 1, 1891.	Midhurst	Jan. 1, 1890.
Steyning (East)	May 1, 1891.	Westbourne ..	Dec. 31, 1891.
Horsham	April 2, 1890.	Worthing	Aug. 23, 1890.
Petworth	Feb. 2, 1891.	Littlehampton	March 25, 1890.
Thakeham . . .	Jan. 1, 1890.	Arundel	May 23, 1891.
East Preston ..	March 1, 1891.	Horsham Urban,	July 8, 1896.

Table Va shows the new cases of infectious disorders notified in each year and the deaths arising therefrom in the whole area, while Table VI. shows similar facts for the rural portion.

In West Sussex the figures for ENTERIC FEVER are excessive owing to the epidemic of 1893 ; excluding that year, there still remain a large number of cases in both urban and rural districts in each year.

SMALL POX was a rare disease from 1876 to 1892, but in 1893 and again in 1896, there were a great many cases, chiefly owing to the prevalence of mild cases among tramps ; in the former year the disease was met with at Horsham and in the northern part of the county ; in 1896 it was common along the sea coast, or southern part of the district. In the past twenty-one years small pox has caused 23 deaths, or rather more than one a year, or about one in 100,000 persons living.

SCARLATINA appears each year, but the mortality from this cause is now very small, and much less than in any previous five-year period. The cases are not less frequent, but they are of a less severe type. There were 1,071 cases notified in the past six years, and only 18 deaths. In 1896 only two children died from this disorder out of a population of 120,910.

DIPHTHERIA, on the other hand, is increasing in frequency and in severity; it used to be most common in rural districts, but in recent years it has become more prevalent in towns.

There were 1,174 cases notified in the past six years, and there were 250 deaths, or 21·3 per cent. of persons attacked; in rural districts the case mortality was 19·2 per cent., and in urban districts it was 27·0 per cent.

Diphtheria is more than twelve times as fatal as scarlatina.

Tables VI. and VII. give the number of deaths in the rural and in the urban districts from each notifiable disease, and also from four common disorders which are non-notifiable, also the death-rates from each group.

The rates are higher in each group in the urban than in the rural districts.

The effect on the general death rate from this group of disorders is not very great.

In *rural* districts, if there were no deaths from notifiable diseases, the mean annual death-rate would be reduced from 14·71 to 14·08 per 1,000.

In *urban* districts a similar process would reduce the mean annual death-rate from 15·66 to 14·82 per 1,000.

But since many of these persons would in the meantime die from other non-infectious disorders, the effect on the general death-rate would be less than shown above.

Measles, whooping cough, and diarrhœa carry off yearly a large number of children; they were most frequent as causes of death in 1876-80, and in 1886-90, and least frequent in the alternate five year periods.

Table IX. shows the number of deaths to population in rural and urban districts from five common disorders of childhood. The order of frequency varies considerably.

Table X. shows for each rural district the deaths not only from notifiable and non-notifiable diseases, but from phthisis, lung diseases, heart disease, and from all causes, while Table XI. shows the death-rates in each rural district from these various disorders during the twenty years 1876-95. There is a general uniformity throughout the table which would be still more marked if the figures for each group of diseases had been corrected for age and sex distribution; the correction given in the first column only applies to the general death-rate from all causes.

TABLE V_A—Showing the New Cases of Infectious Diseases notified in the Combined District during the six years, 1891-96, and the deaths therefrom.

	New Cases Notified.							Deaths.					
	1891.	1892.	1893.	1894.	1895.	1896.	Total.	1891.	1892.	1893.	1894.	1895.	1896.
Small Pox..	1	—	21	4	—	50	76	8	—	6	—	—	2
Scarlatina ..	208	167	337	111	116	132	1,071	18	1		3	2	2
Diphtheria	109	187	173	162	250	293	1,174	250	36	33	39	54	68
Membranous Croup..	2	3	8	5	4	4	26	16	—	6	3	2	3
Enteric Fever	43	79	1,559	57	64	84	1,886	260	6	212	12	8	15
Continued Fever	2	—	—	—	9	—	11	—	—	—	—	—	—
Relapsing Fever	—	—	—	1	—	—	1	—	—	—	—	—	—
Puerperal Fever	2	2	8	5	3	4	24	5	—	—	1	1	1
Erysipelas ..	48	99	121	88	90	73	519	33	8	7	4	7	2
Total ..	415	537	2,227	433	536	640	4,788	590	51	271	62	74	93
Urban cases	133	124	1,486	77	153	262	2,235	287	10	182	5	34	52
Rural cases	282	413	741	356	383	378	2,553	303	41	89	57	40	41

Not including two deaths in 1892, thirteen in 1893, and three in 1894, in Horsham Urban District.

TABLE VI.—Showing the New Cases of Infectious Diseases notified in the Rural Districts during the six years, 1891-96, and the deaths therefrom.

Disease.	New Cases Notified.						Deaths.						
	1891.	1892.	1893.	1894.	1895.	1896.	Total.	1891.	1892.	1893.	1894.	1895.	1896.
Small Pox ..	1	—	21	2	—	32	56	8	—	6	—	—	2
Scarlatina ..	114	127	240	93	98	95	767	12	—	5	2	1	2
Diphtheria ..	105	168	166	148	151	134	872	168	33	30	36	25	24
Membranous Croup ..	2	3	8	4	4	2	23	15	—	6	3	2	2
Enteric Fever ..	27	56	210	40	59	66	458	77	3	37	12	8	10
Continued Fever ..	2	—	—	—	8	—	10	—	—	—	—	—	—
Relapsing Fever ..	—	—	—	1	—	—	1	—	—	—	—	—	—
Purperal Fever ..	1	1	5	4	3	1	15	2	—	—	—	1	—
Erysipelas ..	30	58	91	64	60	48	351	21	5	5	4	3	1
Total ..	282	413	741	356	383	378	2,553	303	41	89	57	40	41

TABLE VII.—Showing the Deaths and Death-rate from Zymotic Diseases in the Rural Districts in the twenty years, 1876-95, and in 1896.

Period.	Notifiable.								Non-notifiable.				Total.		Mean annual Death-rate per 100,000 persons living.				
	Small Pox	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	FEVERS.			Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Notifiable.	Non- notifiable.					
						Enteric.	Continued.	Puerperal.								Erysipelas.			
1876-80..	6	56	66	—	4	46	10	15	14	48	124	118	10	217	300	517	62	86	148
1881-85..	7	73	147	—	5	57	5	11	36	35	100	92	15	341	242	583	85	60	145
1886-90..	2	25	83	—	4	52	2	8	16	58	136	105	10	192	309	501	47	75	122
1891-95..	6	10	144	13	—	67	—	2	20	58	111	79	19	262	267	529	62	63	125
1896 ..	2	2	24	2	—	10	—	—	1	13	37	10	3	41	63	104	48	74	122
Total ..	23	166	464	15	13	232	17	36	87	212	508	404	57	1053	1181	2234	63	71	134

Table VIII.—Showing the Deaths and Death-rate from Zymotic Diseases in the Urban Districts in the twenty years, 1876-95, and in 1896.

Period.	Notifiable.								Non-notifiable.				Total.		Mean annual Death-rate per 100,000 persons living.			
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Notifiable.	Non- notifiable.				
					Typhus.	Enteric.	Continued.	Puerperal.										Erysipelas.
1876-80..	—	26	10	—	—	7	1	4	2	15	27	34	3	50	79	71	113	184
1881-85..	—	7	10	—	—	12	3	1	4	20	14	28	5	37	67	38	69	107
1886-90..	1	24	19	—	—	17	1	1	5	13	55	36	5	68	109	61	99	160
1891-95..	4	6	45	2	—	181	—	3	12	61	39	59	4	253	163	152	98	250
1896 ..	—	—	44	1	—	5	—	1	1	19	12	6	2	52	39	145	108	253
Total ..	5	63	128	3	—	222	5	10	24	128	147	163	19	460	457	84	95	179

TABLE IX.—Showing the Deaths in the Rural and Urban Districts from five Zymotic Diseases in the twenty years, 1876-95, and in 1896.

PERIOD.	RURAL.						URBAN.					
	Deaths from					Population.	Deaths from					
	Scarlatina.	Diphtheria.	Measles.	Whooping Cough.	Diarrhoea.		Scarlatina.	Diphtheria.	Measles.	Whooping Cough.	Diarrhoea.	
1876-80	56	66	48	124	118	69,640	26	10	15	27	34	
1881-85	73	147	35	100	92	80,150	7	10	20	14	28	
1886-90	25	83	58	136	105	82,340	24	19	13	55	36	
1891-95	10	144	58	111	79	84,830	6	45	61	39	59	
1896 ..	2	24	13	37	10	84,935	—	44	19	12	6	
Total	166	464	212	508	404		63	128	128	147	163	

TABLE X.—Showing the Deaths from various causes in each Rural District in the twenty years, 1876-95, and in 1896.

Period, 1876-95.	Notifiable.							Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.		
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.				Measles.	Whooping Cough.	Diarrhoea.					Rheumatic Fever.	
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
Steyning West ..	—	23	54	2	7	45	5	6	17	21	66	67	3	302	444	270	3,152
Steyning East* ..	1	28	26	3	1	17	1	4	6	28	64	102	9	158	284	156	1,857
Horsham† ..	7	25	69	1	2	20	8	8	12	59	84	64	9	421	811	396	4,506
Petworth..	2	9	63	—	—	20	—	4	6	10	39	20	5	268	504	292	3,003
Thakeham ..	1	25	52	1	2	19	—	6	13	10	69	33	5	221	436	240	2,462
East Preston ..	—	25	47	2	—	38	1	2	6	19	42	57	2	214	381	225	2,502
Midhurst..	10	28	81	2	1	41	2	4	18	37	72	30	16	391	581	443	4,252
Westbourne ..	—	1	48	2	—	22	—	2	8	15	35	21	5	137	323	119	1,655
Total ..	21	164	440	13	13	222	17	36	86	199	471	394	54	2,112	3,764	2,141	23389
1896 ..	2	2	24	2	—	10	—	—	1	13	37	10	3	72	145	147	1,068

* Excluding Aldrington after September 30th, 1893.

† Including Cowfold in 1895-96.

TABLE XI.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in the Rural Districts during the twenty years, 1876-95, and the corrected Death-rate.

Rural District.	Corrected Death-rate.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Steyning West } ..	1,375	1,440	{ 74	73	140	205	125
Steyning East } ..			{ 67	152	123	201	113
Horsham	1,310	1,394	48	68	132	251	122
Petworth	1,371	1,570	54	39	139	263	153
Thakeham	1,298	1,498	72	71	135	265	145
East Preston	1,266	1,483	72	71	128	223	134
Midhurst	1,367	1,494	66	55	138	203	155
Westbourne (1881-95)	1,284	1,501	77	71	123	293	107

TABLE XII.—Showing the Deaths and Death-rate per 100,000 persons living in the Combined District from all causes and from various causes in the twenty years, 1876-95, and in 1896.

DEATHS.
DEATH-RATE PER 100,000.

Period.	All Diseases.	Zymotic.		Phthisis.	Lung Disease.	Heart Disease.	Population in the middle of each period.	All Diseases.	Zymotic.		Phthisis.	Lung Disease.	Heart Disease.
		Notifiable.	Non-notifiable						Notifiable.	Non-notifiable			
1876-80 ..	6,496	267	379	714	950	549	83,630	1,552	64	90	170	225	131
1881-85 ..	7,195	378	309	691	1,081	655	99,500	1,428	76	62	139	217	132
1886-90 ..	7,550	260	443	725	1,206	772	104,330	1,448	50	85	139	236	148
1891-95 ..	8,952	515	779	631	1,412	898	188,060	1,554	88	134	110	247	156
1896 ..	1,593	93	102	111	201	213	120,910	1,317	77	84	92	166	176
Total ..	31,786	1,513	2,012	2,872	4,850	3,087		1,487	70	92	137	226	143

TABLE XIII.

MEASLES.

	0 to 1.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 25.	25 & over.	M.	F.	Total.	Rate per 100,000.
1876-80	19	26	12	5	1	—	—	27	36	63	16.0
1881-85	13	16	13	6	3	—	4	33	22	55	11.0
1886-90	17	21	21	8	2	1	1	36	35	71	13.6
1891-95	25	35	36	15	6	1	1	65	54	119	20.2
Total	74	98	82	34	12	2	6	161	147	308	15.2

WHOOPING COUGH.

1876-80	..	77	43	30	1	—	—	—	71	80	151	36.1
1881-85	..	58	29	22	4	1	—	—	54	60	114	22.8
1886-90	..	94	50	40	7	—	—	—	85	106	191	36.6
1891-95	..	73	43	28	5	1	—	—	71	79	150	25.4
Total	..	302	165	120	17	2	—	—	281	325	606	30.2

DIARRHŒA.

1876-80	95	16	12	1	1	1	26	78	74	152	36.3
1881-85	72	8	8	3	—	—	29	73	47	120	24.0
1886-90	79	21	10	3	3	—	25	79	62	141	27.0
1891-95	86	23	3	1	—	—	25	60	78	138	23.4
Total	332	68	33	8	4	1	105	290	261	551	27.9

TABLE XIV.

SCARLATINA.

	0 to 1.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 25.	25 & over.	M.	F.	Total.	Rate per 100,000
1876-80 ..	4	8	36	22	8	1	3	32	50	82	19.6
1881-85 ..	3	8	30	25	8	4	2	46	34	80	16.0
1886-90 ..	6	6	19	10	4	3	1	25	24	49	9.4
1891-95 ..	1	—	5	3	3	1	3	7	9	16	2.7
Total ..	14	22	90	60	23	9	9	110	117	227	11.9

DIPHTHERIA.

1876-80 ..	2	2	31	30	4	3	4	38	38	76	18.2
1881-85 ..	4	11	47	62	18	9	6	75	82	157	31.5
1886-90 ..	4	6	35	39	10	4	4	47	55	102	19.6
1891-95 ..	4	10	57	84	20	7	7	99	90	189	32.0
Total ..	14	29	170	215	52	23	21	259	265	524	25.1

The next two Tables, XIII. and XIV., are of interest, since they show the incidence of five common disorders at the early periods of life, and the rates given show the variations in the whole of the combined district in different five-year periods.

TUBERCULOSIS did not appear in the register until 1878, when it was put down as the cause of three deaths; it has appeared with increasing frequency ever since, and in 1896 there were 63 deaths ascribed to this disease.

This is probably due to the more accurate view of the disease, and it chiefly occurs in those districts where there is a younger generation of medical men.

In former days the deaths of children were often recorded as due to scrofula, diarrhoea, tabes mesenterica, marasmus, &c.; these deaths are now generally ascribed to tuberculosis.

In a similar manner, many deaths which used to be recorded as due to phthisis or consumption, now appear under a new name. All the deaths below five years of age now registered as tuberculosis would probably in bygone days be put down to one of the above named disorders; all the deaths of five years old and upwards were then probably called phthisis.

An examination of Table XV. will show that 272 persons (112 male and 160 female) died from this cause at five years of age and upwards.

If these deaths at and above five years of age are added to the phthisis deaths, the numbers will be so altered as to show that consumption is not decreasing so much as many suppose.

		Phthisis.		Tuberculosis.		Total.		Rate per 100,000.
1876-80	..	714	..	3	..	717	..	.171
1881-85	..	691	..	28	..	719	..	144
1886-90	..	725	..	83	..	808	..	155
1891-95	..	631	..	158	..	789	..	135

Lung diseases are chiefly fatal in infant life and in advanced age.

TABLE XV.

LUNG DISEASES.										
		0 to 5.	5 to 15.	15 to 25.	25 to 70.	70 & over.	M.	F.	Total.	Rate per 100,000.
1876-80	..	317	45	24	307	257	524	426	950	225
1881-85	..	408	51	24	330	268	609	472	1,081	217
1886-90	..	434	42	35	383	312	710	496	1,206	231
1891-95	..	471	58	28	429	426	737	675	1,412	247
Total	..	1,630	196	111	1,449	1,263	2,580	2,069	4,649	230

PHTHISIS.										
1876-80	..	—	39	148	519	8	377	317	714	170
1881-85	..	—	32	147	510	2	350	341	691	139
1886-90	..	—	37	164	511	13	377	341	725	139
1891-95	..	—	21	135	463	12	329	302	631	110
Total	..	—	129	594	2,003	35	1,433	1,328	2,761	140
TUBERCULOSIS.										
1876-80	..	4	3	—	—	—	2	5	7	1
1881-85	..	26	16	3	9	—	27	27	54	11
1886-90	..	82	43	11	29	—	88	77	165	32
1891-95	..	130	71	39	48	—	129	159	288	41
Total	..	242	133	53	86	—	246	268	514	21

METEOROLOGY.

The following tables give the

- a. Amount of Rainfall.
- b. Hours of Bright Sunshine.
- c. Accumulated Heat.
- d. Earth Temperature.
- e. Climate of Worthing.

RAINFALL.

The rainfall at different places in the combined district is here contrasted for a term of years :—

			WORTHING.			PETWORTH.		
Year.			Inches.	Rainy Days.		Inches.	Rainy Days.	
1881	..	..	29·97	..	161	..	34·89	.. 115
1882	..	..	32·70	..	191	..	35·69	.. 145
1883	..	..	28·10	..	170	..	35·80	.. 142
1884	..	..	24·75	..	119	..	26·65	.. 115
1885	..	..	29·28	..	150	..	33·30	.. 124
1886	..	..	31·89	..	164	..	38·09	.. 147
1887	..	..	21·28	..	137	..	28·57	.. 103
1888	..	..	25·88	..	181	..	35·38	.. 116
1889	..	..	23·92	..	159	..	28·35	.. 141
1890	..	..	22·84	..	149	..	29·30	.. 139

			WORTHING.			ARUNDEL.		
			Author.			A. Holmes, Esq.		
Year.			Inches.	Rainy Days.		Inches.	Rainy Days.	
1891	..	..	29·86	..	172	..	32·89	.. 168
1892	..	..	23·73	..	141	..	27·62	.. 129
1893	..	..	25·12	..	142	..	26·21	.. 130
1894	..	..	35·71	..	184	..	37·73	.. 167
1895	..	..	26·09	..	161	..	30·27	.. 136
1896	..	..	25·74	..	152	..	28·35	.. 128

Year.	WESTBOURNE.				HORSHAM.			
	Rev. L. B. Birkett, M.A.				H. Padwick, Esq.			
	Inches.	Rainy Days.			Inches.	Rainy Days.		
1891	35·94	..	198	..	38·84	..	178	
1892	26·95	..	155	..	27·53	..	161	
1893	27·75	..	158	..	25·06	..	156	
1894	39·04	..	192	..	42·18	..	189	
1895	29·34	..	158	..	31·36	..	153	
1896	27·74	..	173	..	33·01	..	153	

The mean annual rainfall at Worthing is equal to nearly 28in. and the varying amounts in each period of five years since 1852 are shown in the following table.

During the forty-five years, 1852-96, the rainfall has exceeded 30in. per year on fourteen occasions, and nineteen times it has been below 26in. each year.

The driest period occurred in the five years, 1854-58, when 111·80in. fell, giving an annual mean of 22·36in. The two driest consecutive years were 1854 and 1855, when 20·1in. and 20·7in. fell respectively. The wettest period was in the five years, 1877-81, when 159·82in. fell, giving an annual mean of 31·96in., or a yearly excess of 9·60in. over the dry period. Since one inch of rainfall is equal to nearly 101 tons of water per acre, the mean annual difference between the driest and wettest years was equal to nearly 970 tons of water per acre.

The driest months on the average are from February to June, the lowest point being reached in April; there is a steady rise during July and thence to the end of October, when the highest point is reached, and then a decline takes place to the end of January. During recent years May, June, and August have shown much lower amounts of rainfall than in the earlier periods, while July and September show a marked increase. The greatest rainfall was in 1852, when 39·41in. were recorded; the least rainfall was in 1858, when 18·80in. of rain fell. The maximum and minimum records for each month are also given; they show the greatest and least rainfall in that month during 1852-96, but they occurred in different years.

In 1862, there were 198 wet days; in 1858, there were 107 wet days; these are the extremes, the mean number being 157 days, or much less than half the days in the year.

The greatest amount of rain in twenty-four hours was recorded on October 15th, 1882, when 2·11in. were registered, followed by 0·91in. the next day, so that in forty-eight hours 3·02in. of rain fell.

In the hot, dry year 1893, as much as 1·95in. fell on October 11th, and in the same year 1·01in. fell on two successive days in September. Such large amounts are, however, very uncommon, and it is very rare to register an inch of rain per day. This occurred four times in 1893, three times in 1894, and twice in 1896, or only on nine occasions in the last four years.

The marked feature in 1896 was the dry period for the first eight months of the year, while the remaining four months were very wet. Only 9·20in. of rain were recorded up to the last day of August, and this is lower than in any year since observations were commenced. In 1858, and again in 1893, the rainfall was slightly lower during the first half-year than in 1896, but in those years there was more rain in July and August. July, 1893, was a very wet month, following a very dry period from March 1st to July 4th.

The mean rainfall for the eight months, January 1st to August 31st, is equal to 15·75in., but on five occasions it amounted to less than eleven inches :—

Year.		1st Qr.		2nd Qr.		July.		August.		Total.
1855	..	2·90	..	4·20	..	2·60	..	0·80	..	10·50
1858	..	2·80	..	4·00	..	2·10	..	1·70	..	10·60
1874	..	3·75	..	3·98	..	0·66	..	1·56	..	9·95
1887	..	4·44	..	3·00	..	0·73	..	2·25	..	10·42
1896	..	3·74	..	3·17	..	1·03	..	1·26	..	9·20

The driest period in the whole series was from March 2nd to May 15th, 1893, when, during these 74 days, rain to the amount of 0·41in. fell on five days only ; on twenty-nine consecutive days, and again on twenty-four days in this period, there was no rainfall at all.

There were some useful rains during 1896 in the months of March and June, differing in this respect from 1893, when very little rain fell in those months ; hence the country was not dried up at the beginning of July, 1896, as it was three years previously ; the hay and corn harvests were about a month earlier than usual, and the crops were well gathered in during a hot, fine July. In 1893, the wet July spoiled much of the grass and the hay and corn harvests were much delayed and badly garnered.

There was much unsettled weather in August, and the cool, wet months of September and October prevented the due ripening of all kinds of outdoor fruit. The excessive rainfall was, however, of great benefit to wells and stores of water, which, in many places, had previously yielded but scanty supplies. The deep wells will now, in due course, be replenished, and this is all the more important, as in some towns along the South Coast the lowering of the water level in some deep wells had caused much anxiety during the year.

TABLE XVI.—RAINFALL AT WORTHING, 1852-96.

Period.	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.	Period.	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
1852-56	22.98	34.09	31.06	49.68	137.81	1877-81	35.32	31.89	43.88	48.73	159.82
1857-61	23.20	29.50	35.30	47.20	135.20	1882-86	33.49	26.84	35.51	51.88	147.72
1862-66	41.50	26.30	35.40	50.10	153.30	1887-91	25.07	23.81	34.47	40.43	123.78
1867-71	31.55	25.01	31.84	34.82	123.22	1892-96	25.46	17.80	42.01	51.12	136.39
1872-76	33.79	22.25	31.90	52.52	140.46						

MEAN RAINFALL IN EACH MONTH.

Period.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1852-61	2.20	1.19	1.23	1.60	2.26	2.50	1.72	2.33	2.59	4.07	3.11	2.50	27.30
1862-71	2.96	2.06	2.28	1.46	1.95	1.72	1.67	2.17	2.89	3.86	2.01	2.62	27.65
1872-81	2.75	2.53	1.63	1.65	1.53	2.23	1.79	3.04	2.75	3.64	3.82	2.67	30.03
1882-91	2.39	1.65	1.81	1.61	1.85	1.61	2.52	2.12	2.36	3.72	3.24	2.27	27.15
1892-96	2.34	1.36	1.40	1.41	0.70	1.45	3.34	1.80	3.26	4.41	3.03	2.78	27.28
1852-96	2.55	1.80	1.70	1.56	1.77	1.95	2.08	2.34	2.72	3.89	3.04	2.55	27.95
Mean Total from Jan. 1st.	2.55	4.35	6.05	7.61	9.38	11.33	13.41	15.75	18.47	22.36	25.40	27.95	
Maximum.	6.73	5.00	4.80	3.96	4.28	5.44	5.49	5.18	6.54	10.6	8.19	6.32	
Minimum.	0.20	0.09	0.01	0.08	0.22	0.22	0.18	0.50	0.86	0.68	0.62	0.53	

TABLE XVII.—BRIGHT SUNSHINE.

YEAR.	Number of Hours.			Percentages of possible duration.			
	Jan. 1 to Mar. 31.	Jan. 1 to June 30.	Jan 1 to. Sept 30.	Jan. 1 to Dec. 31.	Jan. 1 to Mar. 31.	Jan. 1 to June 30.	Jan. 1 to Sept. 30. Jan. 1 to Dec. 31.
1887 ..	243	836	1,468	1,684	28	38	41 38
1888 ..	162	615	1,044	1,240	18	28	29 28
1889 ..	187	665	1,141	1,293	21	29	32 30
1890 ..	222	753	1,265	1,491	24	34	35 34
1891 ..	281	841	1,336	1,563	31	35	37 36
1892 ..	267	955	1,477	1,684	25	41	42 39
1893 ..	308	1,047	1,635	1,875	34	46	46 43
1894 ..	354	901	1,357	1,579	32	37	37 34
1895 ..	277	915	1,567	1,776	27	37	42 40
1896 ..	202	827	1,353	1,608	20	35	38 36
Mean ..	250.3	835.5	1,364.3	1,579.3	26.0	36.0	37.9 35.7

TABLE XVIII.—ACCUMULATED HEAT.

Year.	Day degrees above 42° F.				Day degrees below 42° F.			
	Jan. 1 to Mar. 31	Jan. 1 to June 30.	Jan. 1 to Sept. 30.	Jan. 1 to Dec. 31.	Jan. 1 to Mar. 31.	Jan. 1 to June 30.	Jan. 1 to Sept. 30.	Jan. 1 to Dec. 31.
1887 ..	179	1,162	2,729	3,033	453	524	524	836
1888 ..	83	941	2,363	2,876	517	577	577	701
1889 ..	149	1,300	2,843	3,277	427	448	448	624
1890 ..	254	1,227	2,802	3,285	271	305	305	758
1891 ..	155	1,128	2,658	3,144	515	565	565	721
1892 ..	156	1,161	2,685	3,053	490	554	554	759
1893 ..	302	1,579	3,327	3,799	353	373	373	559
1894 ..	298	1,282	2,822	3,403	300	303	303	388
1895 ..	103	1,142	2,894	3,400	721	745	755	921
1896 ..	273	1,378	3,059	3,454	213	237	237	464
Mean ..	195.2	1,230.0	2,818.2	3,272.4	426.0	464.1	464.1	673.1

TABLE XIX.—CLIMATE OF WORTHING.

MONTH.	TEMPERATURE.							Amount of Cloud.	RAIN.	
	MEANS.				EXTREMES.				Amount.	No. of Wet Days.
	9 a.m	Min.	Max.	Range.	Mean.	Min.	Max.			
	deg.	deg.	deg.	deg.	deg.	deg.	deg.	Inches.		
January	41·0	37·2	45·3	8·1	41·3	30·6	50·9	8·6	0·70	7
February	40·0	35·1	45·5	10·4	40·3	24·3	56·8	8·9	0·32	9
March	46·1	40·4	50·8	10·4	45·6	32·0	61·5	7·8	2·72	21
April	50·7	41·3	55·9	14·6	48·6	32·1	62·2	7·6	0·47	10
May	56·1	44·1	64·2	20·1	54·1	33·3	72·8	5·0	0·35	3
June	63·2	52·7	68·7	16·0	60·7	43·1	80·7	6·3	2·35	11
July	62·1	54·8	68·4	13·6	61·6	46·2	74·7	5·9	1·03	8
August	61·2	54·1	67·0	12·9	60·5	45·8	75·1	6·3	1·26	13
September	58·4	52·0	63·0	11·0	57·5	40·2	69·4	6·8	6·54	24
October	48·1	42·0	54·3	12·3	48·1	33·0	62·8	6·6	4·23	16
November	40·3	36·2	46·8	10·6	41·5	29·0	56·5	6·3	1·39	8
December	40·5	35·3	44·3	9·0	39·8	23·8	50·6	8·2	4·38	22

Year 1896	50.6	43.8	56.2	12.4	50.0	24.3	80.7	7.0	25.74	152
" 1895	50.4	43.0	55.5	12.5	49.3	16.2	77.9	6.4	26.09	161
" 1894	51.2	44.9	55.8	10.9	50.3	12.9	80.2	6.6	35.71	184
" 1893	52.3	44.0	57.7	13.7	50.9	18.2	84.7	5.5	25.12	142
" 1892	49.1	41.8	54.5	12.7	48.2	20.2	76.0	5.8	23.73	141
" 1891	49.4	42.4	54.8	12.2	48.4	16.5	77.0	5.9	29.86	172
" 1890	49.4	42.2	54.6	12.4	48.4	14.9	78.0	6.2	22.84	149
" 1889	49.5	42.7	54.8	12.1	48.8	21.9	81.5	6.4	23.92	159
" 1888	48.0	42.4	53.3	10.9	47.8	20.2	78.8	6.4	25.88	181
" 1887	48.4	41.6	54.1	12.5	47.9	17.4	82.0	5.7	21.28	137
" 1886	50.0	44.0	55.2	11.2	49.6	23.2	78.0	5.8	31.89	164
" 1885	50.0	43.7	55.1	11.4	49.4	25.2	81.7	5.7	28.09	156
" 1884	52.0	45.6	56.8	11.2	51.2	27.0	83.3	5.8	23.51	126
" 1883	50.7	43.9	55.9	12.0	49.9	23.3	75.7	5.7	26.05	174
" 1882	51.6	45.1	56.5	11.4	50.8	26.6	81.0	5.8	32.35	180
" 1881	50.3	43.4	55.0	11.6	49.2	13.5	82.0	5.6	29.60	142

HOURS OF BRIGHT SUNSHINE.

	WESTBOURNE.				BRIGHTON.				Hours of Possible Sunshine.
	Rev. L. B. Birkett, M.A.	Hours.	Sunless Days.		Dr. Newsholme.	Hours.	Sunless Days.		
January ..	52·6	..	16	..	48·91	..	16	..	260
February ..	76·9	..	10	..	78·06	..	8	..	276
March ..	124·5	..	11	..	104·06	..	8	..	364
April ..	149·7	..	2	..	140·92	..	3	..	410
May ..	275·0	..	1	..	274·08	..	1	..	475
June ..	263·4	..	1	..	287·27	..	2	..	486
July ..	263·0	..	1	..	254·67	..	1	..	487
August ..	170·2	..	2	..	185·68	..	2	..	443
September ..	108·1	..	5	..	116·83	..	5	..	373
October ..	137·8	..	3	..	133·82	..	5	..	327
November ..	97·1	..	8	..	107·77	..	8	..	264
December ..	46·6	..	8	..	41·99	..	10	..	241
Year ..	1,764·9		68		1,774·06		69		4,406

		Westbourne.	Brighton.	Greenwich.	South of England
		Hours.	Hours.	Hours.	Hours.
1890 ..	..	1,773·8	1,708·8	1,255·0	1,491·0
1891 ..	..	1,682·8	1,717·6	1,231·0	1,563·0
1892 ..	..	1,859·8	1,756·6	1,277·6	1,684·0
1893 ..	..	2,070·0	1,971·7	1,454·0	1,875·0
1894 ..	..	1,740·9	1,716·8	1,051·3	1,579·0
1895 ..	..	1,982·7	1,916·9	1,225·4	1,776·0
1896 ..	..	1,764·9	1,774·1	1,015·7	1,608·0
Mean ..	..	1,839·3	1,794·6	1,215·7	1,653·7

The observations at Westbourne are taken with a Jordan Photographic recorder; at the other stations the Campbell-Stokes recorder is used.

In Table XVII., the hours of bright sunshine are given for a period of ten years and also the percentage of possible duration. Clear, bright weather does not, however, always mean warm weather, and Table XVIII. has, therefore, been constructed so as to show the amount of heat above and below a certain fixed value which has been experienced during the past ten years. In the Table of Accumulated Heat the value is given in day degrees.

THE TEMPERATURE OF THE SOIL.

The temperature of the soil at 9 a.m., one foot below the surface of the ground at Worthing, was taken daily up to August, 1894, by the late W. J. Harris, Esq., F.R. Met. Soc., and since November, 1894, by G. B. Collet, Esq., who has kindly given me the use of his tables; the results for each month of 1896, and also for a term of years, are here given :—

	1896.			1891.	1892.	1893.	1894.	1895.
	Mean degrees.	Maximum degrees.	Minimum degrees.	Mean degrees.	Mean degrees.	Mean degrees.	Mean degrees.	Mean degrees.
January	42·4	45·1	39·8	35·1	37·5	35·7	39·5	37·1
February	42·0	44·7	38·8	39·3	40·4	42·0	42·6	33·5
March ..	45·8	50·0	42·2	40·6	39·6	44·7	44·2	39·8
April ..	49·6	53·3	45·5	45·1	47·1	51·8	52·2	48·5
May ..	55·9	58·7	50·3	52·6	53·1	58·5	54·2	56·3
June ..	62·7	67·2	58·9	56·9	59·8	63·7	58·1	61·2
July ..	64·3	67·5	60·2	62·1	61·6	65·0	66·2	62·3
August ..	62·0	64·3	59·3	60·6	62·7	—	61·8	63·2
September	58·9	61·7	54·4	59·7	58·6	—	58·5	61·5
October ..	52·0	57·2	44·0	53·8	48·7	—	52·9	51·9
November	42·6	45·5	38·0	48·8	47·9	45·2	49·1	48·5
December	40·5	44·0	36·7	42·6	40·1	42·3	43·2	43·2
Year	51·7	67·5	38·8	48·9	49·8	—	51·7	50·6

	Mean degrees.			Maximum degrees.			Minimum degrees.		
In 1882	51·8	..	..	66·5	..	..	36·0	..	..
In 1883	51·4	..	..	67·2	..	..	37·0	..	..
In 1884	52·6	..	..	71·0	..	..	38·4	..	..
In 1885	50·8	..	..	67·2	..	..	36·1	..	..
In 1886	50·6	..	..	67·2	..	..	34·3	..	..
In 1887	49·3	..	..	67·2	..	..	35·0	..	..
In 1888	49·3	..	..	64·2	..	..	34·6	..	..
In 1889	50·5	..	..	65·9	..	..	35·3	..	..
In 1890	50·3	..	..	63·9	..	..	33·8	..	..
In 1891	48·9	..	..	65·4	..	..	32·4	..	..
In 1892	49·8	..	..	65·3	..	..	34·4	..	..
In 1893 .. ..	—	..	..	70·5	..	..	33·3	..	..
In 1894	51·7	..	..	65·9	..	..	34·9	..	..
In 1895	50·6	..	..	66·0	..	..	32·8	..	..
In 1896	51·7	..	..	67·5	..	..	38·8	..	..

SALE OF FOOD AND DRUGS ACT, 1875 AND 1879.

Summary of the report of the County Analyst, Otto Hehner, Esq., appointed for the Council of West Sussex, upon the articles analysed by him under the above Acts during the year 1896.

First Quarter, ending March 31st, 1896.

Article.	Result.
Milk, 23 samples	21 genuine, 2 contained respectively 8 and 15 per cent. of added water.
Butter, 14 samples . .	All genuine.
Olive Oil, 7 samples . .	6 genuine, 1 consisted of cotton-seed oil.
Spirits, 6 samples . .	All genuine.
Total number of samples analysed during the Quarter, 50. Adulterated, 3.	

Second Quarter, ending June 30th, 1896.

Olive Oil, 21 samples . .	20 genuine, 1 all cotton-seed oil.
Whiskey, 13 samples . .	11 genuine, 2 adulterated with 8 per cent. of water each.
Milk, 8 samples . .	All genuine.
Total number of samples analysed during the Quarter, 42. Adulterated, 3.	

Third Quarter, ending September 30th, 1896.

Whiskey, 12 samples . .	All genuine.
Butter, 7 samples	All genuine.
Tea, 7 samples	All genuine.
Milk, 4 samples	All genuine.
Total number of samples analysed during the Quarter, 30. Adulterated, 0	

Fourth Quarter, ending December 31st, 1896.

No articles were sent for analysis.

There were sent for analysis during the year 122 samples, and of these 6 or 4·9 per cent. were adulterated.

During the year ended December 31st, 1896, there were 4 convictions:—2 of whiskey, 1 of milk, and 1 of olive oil.

The total costs incurred under these Acts during 1896 were :—

	£	s.	d.
Fees for analysis	63	18	9
Expenses incurred in obtaining samples, &c.	9	3	3
Printing, &c.	2	2	9
Total	£75	4	9

In the seven years, 1890-96, there were 835 articles sent for analysis, and 98, or 11·7 per cent., were found to be adulterated.

These 98 articles were :—

- Spirits, 52 samples, diluted with water.
- Milk, 16 samples, diluted with water.
- Lard, 10 samples mixed with beef fat.
- Oil, 9 samples, mixed with cotton-seed oil.
- Vinegar, 5 samples, mixed with a mineral acid.
- Butter, 3 samples, mixed with margarine.
- Yeast, 2 samples, mixed with starch.
- Cheese, 1 sample, made with skim milk.

COMBINED DISTRICT.

GENERAL TABLES, A AND B.

(A)—Table of DEATHS during the Year 1896, in the WEST SUSSEX

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (i)	Scarlatina. (j)	Diphtheria. (k)
Steyning West R.D.	114	18	8	5	6	38	39	Under 5 5 upwards.			
Steyning East R.D.	90	28	7	5	3	25	22	Under 5 5 upwards.			1 3
Horsham R.D.	225	45	14	11	9	58	88	Under 5 5 upwards.			2 3
Petworth R.D.	129	23	6	7	7	33	53	Under 5 5 upwards.			1 2
Thakeham R.D.	99	13	12	3	2	28	41	Under 5 5 upwards.			2 2
East Preston R.D.	172	27	18	16	8	35	68	Under 5 5 upwards.		1 1	4 4
Midhurst R.D.	173	32	11	3	3	40	84	Under 5 5 upwards.			1
Westbourne R.D.	97	10	7	4	7	32	37	Under 5 5 upwards.			1 1
Worthing U.D.	289	53	43	33	6	75	79	Under 5 5 upwards.			17 22
Littlehampton U.D.	63	10	9	4	1	27	12	Under 5 5 upwards.			1
Arundel U.D.	31	8	3	—	—	8	12	Under 5 5 upwards.			2
Horsham U.D.	115	17	10	8	7	34	39	Under 5 5 upwards.			2
TOTALS.....	1597	284	148	99	59	433	574	Under 5 5 upwards.		1 3	32 39
The subjoined numbers have also to be taken into											
Deaths occurring outside the District among persons belonging thereto.....	3					1	2	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...	7	1	2	2	1	—	1	Under 5 5 upwards.			1 2

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES

Officer of Health, during the year 1896, in the WEST SUSSEX

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK- COMING TO THE KNOWLEDGE OF					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.	
									Typhus.	Enteric.
(a)	(b)	(c)	(d)	(e)						
Steyning West R.D.	10,810	11,300	256	Under 5		3				
				5 upwards.	2	7	8			13
Steyning East R.D.	6,062	6,650	182	Under 5						
				5 upwards.	15	3	7			3
Horsham R.D.	16,798	18,760	423	Under 5		4	2			1
				5 upwards.	5	12	29			9
Petworth R.D.	9,431	9,380	244	Under 5		2	2			
				5 upwards.	1	4	14			1
Thakeham R.D.	8,049	8,000	185	Under 5		1	5	1		
				5 upwards.		15	13			4
East Preston R.D.	8,692	9,525	284	Under 5		1	7	1		
				5 upwards.	4	14	27			6
Midhurst R.D.	14,236	14,370	336	Under 5		1	1			1
				5 upwards.		16	9			10
Westbourne R.D.	7,084	6,950	179	Under 5			2			2
				5 upwards.	5	12	8			16
Worthing U.D.	16,606	19,200	388	Under 5		5	43	1		1
				5 upwards.	17	18	88	1		5
Littlehampton U.D.	4,452	5,460	107	Under 5		2	1			
				5 upwards.	1	2	5			5
Arundel U.D.	2,644	2,640	77	Under 5		1	5			
				5 upwards.		2	10			3
Horsham U.D.	8,087	8,675	215	Under 5		3	1			
				5 upwards.		4	6			4
TOTALS	112951	120910	2,876	Under 5		23	69	3		5
				5 upwards.	50	109	224	1		79

STEYNING WEST RURAL DISTRICT.

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STEYNING WEST RURAL DISTRICT.

The Steyning Rural Sanitary District was divided into two portions on the passing of the Local Government Act, 1894. Steyning West includes fifteen parishes which are enumerated in the next table, while Steyning East includes the remaining seven parishes. Part of Edburton is now under its own name in the western division portion, while the rest, known as Fulking, is now in the eastern division. The change came into effect from January 1st, 1895, and the following figures have reference only to this new district in the present and in previous years :—

Population in 1861	8,735
„ „ 1871	10,377
„ „ 1881	10,904
„ „ 1891	10,810
Male population in 1891	5,526
Female „ „ „	5,284
No. of Inhabited Houses in 1891	2,193
„ Uninhabited Houses in 1891	204
„ Persons to each House in 1891	4.93

The population has remained nearly stationary in most of the parishes for many years, but in Southwick and Kingston several fresh houses have been, and are being erected. There has, in fact, within the last two or three years been a marked increase in building operations all along the coast from Hove to Littlehampton, and the population is now increasing at a much greater rate than in any previous period.

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable; also from four diseases which, though formerly included in the zymotic group, are not notifiable; from the frequent diseases, consumption, lung disease, and heart disease; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.							Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.					Rheumatic Fever.
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
Southwick	—	7	13	1	4	9	2	1	6	22	26	—	69	109	55	758
Kingston	—	—	2	—	1	1	—	—	2	2	1	—	7	9	5	89
Lancing ..	—	—	5	—	—	7	—	—	2	8	8	—	23	39	26	312
Old Shoreham	—	—	1	—	—	5	—	—	1	—	1	—	3	9	13	77
Sompting	—	4	5	—	—	2	1	—	1	6	5	—	23	17	15	192
Coombes	—	—	—	—	—	—	—	—	—	—	—	—	3	1	3	16
Botolphs	—	—	—	—	—	—	—	—	—	—	—	—	1	4	—	19
Bramber	—	—	—	—	—	—	—	—	—	1	1	—	8	3	6	54
Steyning	—	6	6	—	—	5	—	—	4	10	13	1	58	96	37	544
Upper Beeding ..	—	1	1	—	—	5	1	—	—	1	3	—	21	29	11	182
Edburton	—	—	1	—	—	1	—	1	—	1	1	—	4	3	6	40
Woodmancote	—	1	1	—	—	—	—	1	—	1	—	—	12	9	7	75
Henfield	—	2	18	—	1	6	1	2	1	8	5	1	53	77	66	576
Ashurst ..	—	—	2	—	—	2	—	—	—	3	2	—	8	21	8	102
Shermanbury	—	2	—	1	1	2	—	1	—	3	1	1	9	18	12	116
Total ..	—	23	54	2	7	45	5	6	17	66	67	3	302	444	270	3152

Cholera and relapsing fever, though included in the list of notifiable diseases are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for the more important parishes of Southwick, Steyning, and Henfield, while the smaller parishes are grouped together as forming part of the registration sub-district to which each parish belongs.

The mean general death-rate for the whole district is 14·6 per 1000 in the twenty years 1876-95, and there has been a gradual reduction in the rate from 15·6 in the first five, to 13·7 in the last five-year period.

In 1896 the rate of mortality was unusually low.

All deaths occurring in Shoreham Workhouse, which is situated outside this district, have been distributed each year to each parish whence the inmate came. It will be seen that the mortality is fairly uniform throughout the various localities. The higher rate in Steyning is probably due to the proportion of aged persons there being in excess of those living at similar ages in other parishes, and thus more deaths ensue than in a population where there are more young adults or middle aged people. In Southwick, the death-rate is slightly lowered by the presence of a younger population, as shown by the much higher birth-rate.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high. Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·95454; the *recorded* mean death-rate in Table 3 of 14·60, multiplied by this factor, becomes the *corrected* death-rate of 13·93 per 1000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 256 children were registered; of these 134 were male, and 122 were female.

Estimating the population in the middle of the year at 11,300, the birth-rate was equal to 22·6 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.				Birth-rate.			
	1893.	1894.	1895.	1896.	1893.	1894.	1895.	1896.
Southwick Parish ..	85	86	89	78	33·2	33·1	32·6	28·4
Rest of Shoreham S.D.	99	71	75	75	24·7	25·4	28·5	26·5
Steyning Parish ..	42	43	46	30	24·6	25·1	26·9	17·2
Henfield Parish ..	32	43	39	34	15·8	21·1	19·1	16·4
Rest of Steyning S.D.	65	42	38	39	28·1	22·4	20·3	20·5
Total	323	285	287	256	28·4	28·6	26·1	22·6

GENERAL MORTALITY.

There were 114 deaths registered in this district in the year 1896, but to this number must be added the deaths of 2 persons in New Shoreham Workhouse, which is outside the district, leaving the corrected figures at 116.

The 2 Workhouse deaths have been included in Southwick parish, whence the two inmates came.

Estimating the population in the middle of the year at 11,300, the death-rate was equal to 10·3 per 1,000 persons living.

In country places throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

	Deaths.					Death-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Southwick Parish ..	38	38	41	36	..	14·8	14·6	15·1	13·1
Rest of Sub-District	52	35	34	18	..	13·0	8·5	12·8	6·4
Steyning Parish ..	17	20	23	18	..	9·9	11·7	13·4	10·3
Henfield Parish ..	28	28	23	27	..	13·9	13·8	11·3	13·0
Rest of Sub-District	32	25	23	17	..	13·9	10·8	12·3	9·0
Total ..	167	146	144	116		14·7	12·8	13·1	10·3

In each parish the deaths were thus distributed :—

Southwick	36	..	Bramber	2
Kingston	3	..	Steyning	18
Lancing	8	..	Upper Beeding ..	5
Old Shoreham ..	1	..	Edburton	1
Sompting	4	..	Woodmancote ..	2
Coombes	none	..	Henfield	27
Botolphs	2	..	Ashurst	2
Shermanbury ..	..	..	.. ..	5
Total	116.			

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

	Births.	Deaths under one year.	Ratio to 1000 Births.
Southwick Parish	78	7	90
Rest of Shoreham Sub-District ..	75	3	40
Steyning Parish	30	5	167
Henfield Parish	34	2	59
Rest of Steyning Sub-District ..	39	1	25
Total	256	18	70

The mean annual rate in the previous five years, 1891-95, was 92 per 1,000 registered births. In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 3 in the case of those which are notifiable, and 13 in the other class where the number of cases cannot be obtained. The rate of mortality was therefore equal to 1·41 per 1,000.

	Cases.	Deaths.
Small Pox	2	none
Scarlatina	10	none
Diphtheria	8	none
Membranous Croup	none	none
Fevers. {	Typhus	none
	Enteric	2
	Continued	none
	Relapsing	none
	Puerperal	none
Cholera	none	none
Erysipelas	7	1
Total	40	3

In the other class the deaths were as follows :—

Measles	1
Whooping Cough	11
Diarrhoea and Dysentery	1
Rheumatic Fever	none
Total	13

The Infectious Diseases (Notification) Act, 1889, came into force in this district on May 1st, 1891.

The Infectious Disease Prevention Act, 1890, and the Public Health Acts Amendment Act, 1890, came into force here on September 29th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table :

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	—	2	—	2
Scarlatina	6	2	2	—	10
Diphtheria	2	—	6	—	8
Membranous Croup ..	—	—	—	—	—
Enteric Fever	5	3	3	2	13
Puerperal Fever	—	—	—	—	—
Erysipelas	2	—	1	4	7
Total	15	5	14	6	40

The district was in a healthy state during the year and there was no epidemic prevalence of disease; a small outbreak of Small Pox was promptly stopped. Measles and Whooping Cough were frequent in the autumn and several schools were closed in consequence, as the attendance of children was so much reduced.

SMALL POX.—Case 1 : Mr. John Martin, 35 years of age, living at 3, Southwick Street, was taken ill with Small Pox on July 10th, and the rash appeared on July 14th. He had some relations in Portslade, distant about $1\frac{1}{2}$ miles, some of whom had Small Pox in the same month; there was frequent intercourse between these families, and the patient was there last on July 6th. I visited this house on July 19th, having been informed, when at Portslade that morning, that there was some illness in this house; the patient was removed the same morning in an ambulance to Hangleton Hospital where he remained thirty-two days, when he was sent home. There dwelt in this house Mrs. Martin, a son 8 years old, and a niece $4\frac{1}{2}$ years old, each of whom had been well vaccinated in infancy. Mr. Martin had also been vaccinated in infancy and had 3 good marks. No one in this house had ever been revaccinated. The bedding and some clothing used by the patient were at once burnt, and the sum of £2 19s. 6d. was paid in compensation by the Steyning West Rural District Council. The rooms were disinfected with burning sulphur and then cleansed and lime washed. There was no spread of the disease.

Case 2 : Mrs. Chappell, 26 years of age, living at 15, William Street, Fishersgate, a hamlet in the parish of Southwick, situated midway between that village and Portslade, fell ill with Small Pox on July 18th, the rash appearing two days later. I visited this house on July 20th, and the patient was removed the same day to Hangleton Hospital where she remained sixty four days, and was sent home.

In this cottage there dwelt the husband and an infant son, 11 months old; the husband went away to Lancing and the child was sent to some friends. The bedding and some clothing were destroyed by

burning at a cost to the Rural District Council of £1 5s. The rooms were fumigated with burning sulphur and afterwards cleansed and lime washed; the house remained empty for some weeks.

Mrs. Chappell had been vaccinated in infancy, and she bore 3 good marks on her right arm. The husband and the baby had also been well vaccinated in infancy; none of them had ever been revaccinated. There was here also no spread of the disease. The patient caught the disease at Portslade, where she had been staying at 2, Holles Road from July 6th to July 17th, with some friends. The husband was away at work in a brickfield at Lancing all the week, returning home each Saturday, so that he was not much exposed to infection.

The hospital expenses, amounting to £73 13s. 9d., were defrayed by the Steyning Board of Guardians, and the compensation for the destruction of bedding, clothing, &c., amounting to £4 1s. 6d. was defrayed by the Steyning West Rural District Council.

	Hospital Charges.			Conveyance.			Compensation.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Case 1.	24	0	0	0	18	9	2	16	6	27	15	3
Case 2.	48	0	0	0	15	0	1	5	0	50	0	0
Total	72	0	0	1	13	9	4	1	6	77	15	3

WATER SUPPLY.

The Brighton Corporation in the course of the year purchased the New Shoreham Water Works, but the supply of water to Southwick, Kingston, and Lancing College remains as before.

South Lancing is much in need of a good water supply and a movement is in progress for that purpose; there is now a prospect of obtaining water from the Brighton Corporation on easier terms than before.

SEWERAGE AND DRAINAGE.

SOUTHWICK is still in great need of a good system of sewerage; the subject has been much discussed, but nothing of a practical nature was done during the year. The three schemes for dealing with the sewage of this place and Portslade were given in detail in my last annual report; the matter is more pressing now than ever as considerable building operations are in progress.

HENFIELD.—Much of the surface water and house drainage passes down a sewer in the main street and flows into the Wantley Pond at the north end of the town. This pond had not been cleaned out for seventeen years and it had become in a foul condition from the

accumulation of mud and deposit. The main drain was temporarily diverted, the water from the pond was drained off, and in the month of May about 730 cart loads of sludge were removed to a field about 150 yards away, and afterwards this partly dried sludge was utilised in dressing the land. This was done by agreement with the tenant of the farm on whose land the pond was situated for the sum of £30. The owner of the land had previously given his consent. The Wantley Farm House drainage is now diverted from the pond.

In a similar way, a much smaller pond on the opposite side of the main road was cleaned out by agreement at the same time for the sum of £3.

The outfall tank on Henfield Common was emptied and cleaned out in February, at a cost of £3.

STEYNING.—A system of sewerage was carried out in 1877, at a cost of £1,300, and a further sum of £250 was expended in 1878. The money was raised by loan at $3\frac{1}{2}$ per cent. for thirty years; the larger loan was dated February 5th, 1878, and it will be paid off in February, 1908; the smaller loan was borrowed on September 16th, 1878, and it will be paid off in September, 1908. The annual cost of this loan is £84 2s. per year, of which in round figures £54 represented the interest, and £30 the repayment of capital; at the end of the year 1896, the principal had been reduced by these repayments to £700; the charge of £84 in 1896, represented £26 for interest and £58 towards paying off the capital.

A portion of the main sewer between Gatwick Road and Shootingfield was taken up in May; the old stoneware pipes were removed and replaced by a 12 inch iron pipe; the relief drain to Gatwick Pond was disused, and a new man-hole in lieu of a lamp-hole was placed in the garden at Church Cottages.

About 100 yards from the outfall, a defect was found in the main sewer; six pipes were found broken near the post and rail fence in the Shootingfield; these were taken up and replaced by new ones, so that any obstruction to the flow of sewage is now removed.

BY-LAWS IN FORCE IN THE DISTRICT.

By-Laws were made in 1880, by the Guardians of the Poor of the Steyning Union, acting as the Rural Sanitary Authority with respect to new streets and buildings in that portion of the Rural Sanitary District of the Steyning Union which then comprised the contributory places of Aldrington, Henfield, Kingston-by-Sea, Lancing, Portslade, Preston, Southwick, and Steyning, and they were allowed by the Local Government Board, September 29th, 1880. These By-Laws were slightly modified and extended to the whole of the Rural Sanitary District on February 21st, 1889. They were again slightly altered under date October 21st, 1892, and they still remain in force in each parish in this rural district.

By-Laws were also made by the above authority in 1889, for the prevention of nuisances arising from snow, filth, dust, ashes, and rubbish, and for the prevention of the keeping of animals on premises so as to be injurious to health; they were allowed by the Local Government Board on February 21st, 1889, and they still remain in force in each parish in this rural district.

By-Laws were made by the same authority in 1891, with respect to Slaughter Houses in the above named seven parishes or contributory places; they were allowed by the Local Government Board on February 23rd, 1892, and as far as this district is concerned they are still in force in Southwick, Steyning, Henfield, Kingston and Lancing.

The Cowsheds and Dairies have, since April 27th, 1887, been carried on under Regulations made in accordance with the Contagious Diseases (Animals) Act, 1886, and the Dairies, Cowsheds, and Milk Shops Order of 1885.

SCAVENGING AND CLEANSING.

At Southwick a contract is made each year under which all ashes and house refuse are removed once a fortnight and utilised on land in the neighbourhood. The cost is £50 per year.

At Steyning a similar contract was entered into for the first time; the ashes and house refuse are removed once a fortnight and taken to a meadow near the town. The annual cost for this work is £30.

SYSTEMATIC INSPECTION.

The following is a list of routine work during the year, 1896, as recorded in the books of the Sanitary Inspector, Mr. T. F. Gates:—

No. of Houses and Premises inspected	..	..	851
No. of Houses and Premises reported	..	..	334
No. of Nuisances abated by verbal and written notice	..	..	62
No. of Nuisances abated by notice	..	..	17
Houses cleansed and disinfected	..	..	32
Houses whitewashed	..	..	36
Water certificates granted for new houses	..	..	28
Wells cleansed	..	..	3
Cases of overcrowding abated	..	..	none
Samples of Water analysed	..	..	6
Earth Closets provided	..	..	4
Privies altered	..	..	7
Unwholesome Food seized	..	..	none

COWSHEDS AND DAIRIES.

There are 45 cowsheds and dairies frequently inspected and well kept.

BAKEHOUSES.

There are 22 bakehouses inspected from time to time and kept in a clean condition.

SLAUGHTER-HOUSES.

There are 10 slaughter-houses inspected at various times and kept in a clean condition.

MARGARINE ACT.

Very little is sold, and at places where it is sold the clauses of the Act have been complied with.

COMMON LODGING-HOUSES.

There is no common lodging-house in this district.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

INQUESTS.

Inquests were held in ten cases:—Male, 16 days, pneumonia; female, 31 years, heart disease; female, 52 years, suicide by drowning; male, 29 years, found drowned; male, 28 years, accidentally drowned; female, 33 years, suicide by hanging; male, 32 years, suicide on the railway; male, 30 years, suicide by shooting; male, 59 years, pneumonia; female, 9 weeks, convulsions.

There were no deaths returned as “not certified” during the year.

STEYNING WEST RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the two years, 1895-96.

Year.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1895	144	29	6	3	12	32	62
1896	116	18	8	5	6	39	40

STEYNING WEST RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the twenty years, 1876-95, and in the year 1896.

Period.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	—	6	8	—	2	6	3	—	5	—	5	6	16	23	—	—	80
1881-85 ...	—	16	27	—	3	17	2	—	1	—	3	5	21	17	1	—	113
1886-90 ..	—	—	10	—	2	12	—	—	—	—	5	4	15	18	1	6	73
1891-95 ...	—	1	9	2	—	10	—	—	—	—	4	6	14	9	1	34	90
1896 ...	—	—	—	—	—	2	—	—	—	—	1	1	11	1	—	—	16
Total ...	—	23	54	2	7	47	5	—	6	—	18	22	77	68	3	40	372

STEYNING WEST RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Southwick Parish ..	1,479	84	101	135	213	107
Rest of Shoreham S.D.	1,320	75	77	112	148	116
Steyning Parish ..	1,614	62	77	171	284	110
Henfield Parish ..	1,477	79	38	131	197	170
Rest of Steyning, S.D.	1,437	60	58	156	210	126
Mean	1,460	74	73	140	205	125
PERIOD.						
1876-80.. ..	1,565	66	84	204	223	107
1881-85.. ..	1,457	128	82	128	186	130
1886-90.. ..	1,448	54	70	128	220	124
1891-95.. ..	1,370	47	55	100	193	138
1896	1,026	26	115	88	168	124

(A)—Table of DEATHS during the Year 1896, in the STEYNING WE

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox. (j)	Scarlatina. (k)	
Southwick Parish	34	7	2	3	1	7	14	Under 5 5 upwards.			
Rest of Shoreham Sub-District	18	3	2	1	2	8	2	Under 5 5 upwards.			
Steyning Parish	18	5	3	1	2	3	4	Under 5 5 upwards.			
Henfield Parish... ..	27	2	—	—	1	14	10	Under 5 5 upwards.			
Rest of Steyning Sub-District	17	1	1	—	—	6	9	Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	114	18	8	5	6	38	39	Under 5 5 upwards.			
The subjoined numbers have also to be taken into											
Deaths occurring outside the District among persons belonging thereto.....	2	—	—	—	—	1	1	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...								Under 5 5 upwards.			

RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF SICKNESS
 Officer of Health, during the year 1896, in the STEYNING WEST SUB-DISTRICT

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK COMING TO THE KNOWLEDGE OF THE OFFICER OF HEALTH.					
	Census 1891.	Esti- mated to mid- dle of 1895.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.	
									Typhus.	Enteric.
(a)	(b)	(c)	(d)	(e)						
Southwick Parish	2,564	2,750	78	Under 5 5 upwards.	..... 2	3 2	..... 3	.....	.....	..... 4
Rest of Shoreham Sub-District	2,654	2,830	75	Under 5 5 upwards.	.....	..... 1	..... 3	.....	.....	..... 5
Steyning Parish	1,705	1,740	30	Under 5 5 upwards.	.....	.....	.....	.....	.....	..... 3
Henfield Parish	2,006	2,080	34	Under 5 5 upwards.	.....	..... 3	..... 2	.....	.....	..... 1
Rest of Steyning Sub-District	1,881	1,900	39	Under 5 5 upwards.	.....	..... 1	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
TOTALS	10,810	11,300	256	Under 5 5 upwards.	..... 2	3 7	..... 8	.....	.....	..... 13

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
 Rural District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

STEYNING EAST RURAL DISTRICT.

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STEYNING EAST RURAL DISTRICT.

The Steyning Rural Sanitary District was divided into two portions on the passing of the Local Government Act, 1894. Steyning West includes fifteen parishes which are enumerated in the next table, while Steyning East includes the remaining seven parishes. Part of Edburton is now under its own name in the western division portion, while the rest, known as Fulking, is now in the eastern division. The change came into effect from January 1st, 1895, and the following figures have reference only to this new district in the present and in previous years :—

Population in 1861	2,242
„ „ 1871	3,656
„ „ 1881	5,272
„ „ 1891	6,062
Male population in 1891	2,982
Female „ „ „	3,080
No. of Inhabited Houses in 1891	1,160
„ Uninhabited Houses in 1891	53
„ Persons to each House in 1891	5.23

The population has increased in Portslade, Patcham, and West Preston since the census of 1891, but in the other parishes it has remained stationary.

Building operations have been actively carried on in Portslade during the last two years; 45 new houses were erected in 1895, and 41 new houses in 1896. This activity is going on in nearly all the towns along the south coast from Hove to Littlehampton. The next census will probably show an increase at a much greater rate than in any previous decade.

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable; also from four diseases which, though formerly included in

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.								Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.				
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
West Preston ..	—	—	—	—	—	—	—	—	1	1	2	—	—	1	1	17
Patcham ..	—	2	4	—	—	1	—	—	2	4	14	2	18	30	28	212
West Blatchington ..	1	—	—	—	—	—	—	1	—	—	—	—	1	3	2	16
Hangleton ..	—	—	—	—	—	—	—	—	—	—	1	—	3	4	—	16
Portslade ..	—	22	16	3	1	12	1	2	15	51	66	5	103	174	89	1167
Fulking ..	—	—	—	—	—	—	—	—	2	2	—	—	2	5	6	40
Poynings ..	—	—	1	—	—	2	—	1	2	—	1	—	11	12	4	77
Total ..	1	24	21	3	1	15	1	3	22	58	84	7	138	229	130	1545
Aldrington ..	—	4	5	—	—	2	—	1	6	6	18	2	20	55	26	443

the zymotic group, are not notifiable; from the frequent diseases, consumption, lung disease, and heart disease; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for Portslade and Patcham, while the smaller parishes are grouped together as forming the rest of the sanitary district.

The figures for Aldrington are given for the purpose of comparison with former reports, but they are not included in the totals. Aldrington Parish was transferred to Hove in September, 1893.

The mean general death-rate for the whole district is 13·6 per 1000 in the twenty years 1876-95.

In 1896 the rate of mortality was unusually low.

All deaths occurring in Shoreham Workhouse, which is situated outside this district, have been distributed each year to each parish whence the inmate came.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is partly of a rural type, makes the mortality appear a little too high. Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·95454; the *recorded* mean death-rate in Table 3 of 13·63, multiplied by this factor, becomes the *corrected* death-rate of 13·01 per 1000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 182 children were registered; of these 100 were male, and 82 were female.

Estimating the population in the middle of the year at 6,650 the birth-rate was equal to 27·4 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

		Births.				Birth-rate.			
		1893.	1894.	1895.	1896.	1893.	1894.	1895.	1896.
Portslade Parish	..	158	154	164	152	36·3	35·0	36 3	32·7
Patcham Parish	..	22	20	17	15	19·3	17·1	14·2	12·5
Rest of District	..	19	21	22	15	24·7	27·0	27·5	18·7
Total...		199	195	203	182	31·9	30·8	31·2	27·4

GENERAL MORTALITY.

There were 90 deaths registered in this district in the year 1896, but to this number must be added the death of 1 person in New Shoreham Workhouse, which is outside the district, leaving the corrected figures at 84, after deducting seven deaths in Hangleton Hospital of persons not belonging to the district.

The Workhouse death is included in Portslade parish, whence the inmate came.

Estimating the population in the middle of the year at 6,650, the death-rate was equal to 12·6 per 1,000 persons living

In country places throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The following table shows the deaths and death-rate in each locality during the past four years :—

		Deaths.				Death-rate.			
		1893.	1894.	1895.	1896.	1893.	1894.	1895.	1896.
Portslade Parish	..	65	55	55	72	15·0	12·5	12·1	15·5
Patcham Parish	..	7	8	11	6	6·2	6·9	9·2	5·0
Rest of Sub-District	..	8	8	9	6	10·2	10·1	11·2	7·5
Total		80	71	75	84	12·8	11·2	11·5	12·6

In each parish the deaths were thus distributed :—

West Preston	..	1	..	Hangleton	..	..	1
Patcham	..	6	..	Portslade	..	..	72
West Blatchington	..	none	..	Poynings	..	..	2
Fulking	..	..	..	..	..	2	..
Total		..	84.				

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

				Births.	Deaths under one year.	Ratio to 1000 Births.
Portslade Parish	..	..	..	152	26	171
Patcham Parish	..	..	..	15	1	66
Rest of District	..	...	..	15	1	66
Total				182	28	148

The mean annual rate in the former district in the previous eight years, 1888-95, was 101 per 1,000 registered births. In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

There were four deaths from zymotic diseases in the case of those which are notifiable, and six in the other class where the number of cases cannot be obtained. The rate of mortality was therefore equal to 1.50 per 1,000.

					Cases.	Deaths.
Fever.	Small Pox	..	..	..	15	2
	Scarlatina	..	..	..	3	none
	Diphtheria	..	..	..	7	1
	Membranous Croup		..	..	none	none
	Typhus	..	..	..	none	none
	Enteric	..	..	..	3	1
	Continued	..	..	..	none	none
	Relapsing	..	..	..	none	none
	Puerperal	..	..	..	none	none
	Cholera	..	..	..	none	none
	Erysipelas	..	..	..	none	none
Total				..	28	4

In the other class the deaths were as follows :—

Measles	..	..	..	1
Whooping Cough	..	..	..	2
Diarrhœa and Dysentery	..	..	..	3
Rheumatic Fever	..	..	..	none
Total				6

The Infectious Diseases (Notification) Act, 1889, came into force in this district on May 1st, 1891.

The Infectious Disease Prevention Act, 1890, and the Public Health Acts Amendment Act, 1890, came into force here on September 29th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table :

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	—	15	—	15
Scarlatina	1	—	1	1	3
Diphtheria	1	1	3	2	7
Membranous Croup ..	—	—	—	—	—
Enteric Fever ..	—	2	1	—	3
Puerperal Fever ..	—	—	—	—	—
Erysipelas	—	—	—	—	—
Total	2	3	20	3	28

SMALL POX.—An outbreak of small pox occurred at Portslade in July which arose in the following way :—

Alice Anderton, 17 years old, in service at Hove, left her situation on May 27th and went about visiting her friends ; she was at Worthing on June 9th, and stayed there until June 24th, when she went to Angmering ; thence she went to Selsea on June 27th, returning to Worthing on July 1st. She felt poorly on that day, but on July 2nd she went to No. 5, Hangleton Court, Portslade, where she had some relations, and she stayed with them until July 13th, when she entered into service at Worthing. She had a rash on July 4th and she saw a medical man, but no one recognised this case of modified small pox, and she was not ill enough to keep in bed. The medical man who attended her had a mild attack of variola about a fortnight later, and at the same time the outbreak began in Hangleton Court, where four persons were taken ill with small pox in the middle of July. No one contracted the disease at Angmering or Selsea.

On July 19th I saw Alice Anderton at Worthing, and she was removed to Swandean the same day, where she remained isolated until she was convalescent ; on the 19th she was rather pale and weak and she bore evidence of having had modified small pox from the abundance of brown circular spots remaining where the rash had existed.

In the house where she was in service from July 13th to 19th there dwelt the parents and five young children, all of whom had been well vaccinated in infancy. Only the mother was re-vaccinated in this house, but there was no spread of the disease.

During her stay at Worthing, June 9th to 24th, she visited a house where her brother had small pox, and he was removed to Swandean on June 13th.

In this way she contracted the disease about the middle of June, and she developed small pox a fortnight later, and caused it to spread in Hangleton Court. The cases at Southwick and at Hole's Road

were caused by persons from the houses there visiting their relations living in the infected area. In the case of those four persons living elsewhere in Portslade the history of infection was not clearly made out.

The first cases were met with in Hangleton Court, Upper Portslade, where there are eleven cottages occupied by persons of the labouring class.

Although three or four persons had been poorly a week or ten days previously the nature of the illness was not recognised until the evening of July 18th, when a case at Hove having been traced to this locality Mr. Medcalf, the Medical Officer of Health, visited this court and at once removed four adults suffering from small pox into the Hove Infectious Hospital, which is situated in an isolated position on the Downs in the parish of Portslade, and distant about half a mile from Hangleton Court. On visiting the place early on July 19th, I found two more cases in this court, and one in a cottage at Hole's Road, Portslade; I also then heard of a case at Southwick in a cottage occupied by a man who had relations at Hangleton Court; the next day I found two more cases in the same localities, and up to July 26th there were altogether twelve cases in Portslade; of this number ten had been at once removed to the Hospital and two women remained at home, as they could not be persuaded to leave.

On August 3rd, a youth in Hangleton Court fell ill in a cottage whence his brother was removed on July 18th; on August 9th, a man was attacked in a house in Portslade by the Sea, and on August 20th a man had the disease in another house in this locality. These three men were removed to the Hospital directly the rash appeared. The number of inmates in each house is given in the following table. In Hangleton Court, where the occupants mixed freely together, the eleven houses contained thirty-six adults and ten children; the adults consisted of the parents, seven adult sons, five adult daughters, and three adult male lodgers; those under fifteen years of age are reckoned as children. The disease appeared in seven of the eleven houses, attacking only one adult in each cottage except in No. 9, where two brothers fell ill. At No. 6 the patient was treated at home, and in No. 1 the patient returned home after having been at the Hospital only nine days.

In the remaining seven houses, there were eighteen adults and twenty-one children; only one adult was attacked in each house; six patients were removed at an early stage to the Hospital, and one person in Gladstone Terrace was nursed at home.

The inmates of these eighteen houses were more or less exposed to infection, but many other persons must have also incurred some risk from coming into contact with those who went about in public during the early stage.

No child was attacked; most of the cases were of moderate severity, and a few were very mild in character. The man who died

was 69 years old, and in bad health ; the woman who died was 75 years old, and in a feeble state.

		Occupiers.						Small Pox Cases.					
		Adults.		Children.				Adults.		Children.			
		No.	M.	F.	M.	F.		M.	F.	M.	F.		
Hangleton Court.	1	..	3	1	..	—	1	..	—	1	..	—	—
	2	..	1	1	..	—	1	..	—	—	..	—	—
	3	..	1	1	..	—	—	..	—	—	..	—	—
	4	..	1	2	..	—	—	..	—	1	..	—	—
	5	..	4	2	..	—	—	..	1	—	..	—	—
	6	..	1	1	..	—	—	..	—	1	..	—	—
	7	..	2	1	..	—	—	..	1	—	..	—	—
	8	..	1	1	..	2	1	..	—	—	..	—	—
	9	..	3	1	..	2	1	..	2	—	..	—	—
	10	..	2	1	..	—	—	..	1	—	..	—	—
	11	..	1	4	..	2	—	..	—	—	..	—	—
Hole's Road.	1	..	1	1	..	2	2	..	1	—	..	—	—
	2	..	1	1	..	—	2	..	1	—	..	—	—
	3	..	1	1	..	4	3	..	1	—	..	—	—
Gladstone Terrace			3	1	..	—	—	..	—	1	..	—	—
Beaconsfield „		..	1	2	..	—	1	..	—	1	..	—	—
Camden Street		..	1	1	..	3	3	..	1	—	..	—	—
Western Terrace..			2	1	..	—	1	..	1	—	..	—	—
18 houses			30	24		15	16		10	5		—	—
			54			31			15			—	
			85							15			

It was difficult to persuade people to be re-vaccinated. At Nos. 3, 4, 5, 7, 8, 10, and 11, Hangleton Court, no one was found to give consent ; at No. 1, the father and one girl, 13 years old, were re-vaccinated on July 30th ; at No. 2, the parents were re-vaccinated on July 29th ; at No. 6 the husband, who nursed the patient, was done on the same day ; the result in each case was moderately successful, but the consent was given too late to be of much use. At No. 9, the parents and the three children were re-vaccinated successfully on July 19th, but one son, 16 years old, would not consent ; he had a very mild attack on August 3rd, about a fortnight after his brother fell ill.

At Hole's Road, one woman was re-vaccinated on July 21st, one on July 23rd, and one on July 24th, but with no result in any case.

All the patients and all the other inmates of the above named houses had been successfully vaccinated in infancy.

Each house in which a case occurred was fumigated with burning sulphur and afterwards cleansed and limewashed.

Prompt isolation and removal to the Hospital were most effectual aids in stopping the spread of the disease, and for this purpose the Hove District Council gave every facility.

The Steyning East Rural District Council voted a sum of £10 each to Mr. Taylor Allen, the Sanitary Inspector, and to Mr. Sears, the Relieving Officer, for their valuable services in connection with the outbreak.

COST OF THE OUTBREAK.

The total amount paid by the Steyning Board of Guardians to the Hove Urban District Council was £373 9s. 6d. for hospital charges for sixteen patients, but two of the patients were admitted from Southwick and one from Hove, which places are outside of this district. Each case was treated as belonging to the poor law, so that no hospital charge was paid by a District Council; the payments were thus distributed :—

Patients.	Parish.	Hospital Charges.								
		Maintenance and Attendance.			Ambulance.			Total.		
		£	s.	d.	£	s.	d.	£	s.	d.
Thirteen	Portslade	258	0	0	7	5	9	265	5	9
Two	Southwick	72	0	0	1	13	9	73	13	9
One	Hove	33	15	0		15	0	34	10	0
		<hr/>			<hr/>			<hr/>		
Sixteen persons cost		£363	15	0	£9	14	6	£373	9	6
		<hr/>			<hr/>			<hr/>		
Mean		£22	14	8	£0	12	2	£23	6	10

An inclusive charge of £5 5s. per week was made for each patient at Hangleton Hospital; the sixteen cases were there 485 days altogether; the two who died were there seven and ten days respectively; the fourteen who recovered were there 468 days, or an average of 33·4 days for each case. One woman left the Hospital during the night and returned home after a stay of nine days. The shortest period in Hospital was for seven days and the longest period was for sixty-four days.

The Steyning Board of Guardians paid a further sum of £50 18s. 8d. for relief in food, &c., to the families in those houses where the disease broke out, for the outfit of twelve of the patients when they left the Hospital, and for the funeral expenses in the case of the two who died. A sum of £6 15s. was repaid to the Guardians for funeral expenses in one of these cases, thus bringing the outlay under the above head down to £44 3s. 8d., of which £5 15s. 8d. was on behalf of the two Southwick cases, and £38 8s. on behalf of the Portslade cases.

There were fifteen cases at Portslade. One was in a private house, and no aid from the rates was required or given; another was also treated at home, and a small amount was given in aid; a third was treated at home after she had escaped from the Hospital; two died in the Hospital; the remaining ten stayed in the Hospital until they were fit to return home.

TABLE showing details of the cases of Small Pox in Portslade in July and August, 1896.

No.	Name.	Address.	Sex.	Age.	Date of Attack.	Date of Admission to Hospital.	Result.	Hospital charges.				Total cost.	
								Maintenance and attendance, &c.		Ambulance.			
1	Henry Martin ..	5, Hangleton Court ..	M.	40	July 7	July 18	Recovery.	£ 26	s. 5	d. 0	£ 26	s. 16	d. 0
2	Mrs. Hannah Cresswell ..	6, " "	F.	29	10	18	"	18	0	0	18	0	0
3	Frederick C. Parsons ..	10, " "	M.	22	11	18	"	33	0	0	33	0	0
4	Alice Payne ..	4, " "	F.	27	14	18	"	30	15	0	31	11	0
5	Harry Latter ..	9, " "	M.	17	14	18	"	27	0	0	27	18	9
6	Mrs. Helmsley ..	1, Hole's Road ..	F.	22	14	19	"						
7	Mrs. Elizabeth Fortescue	3, Gladstone Terrace ..	F.	56	17	20	"	6	15	0	7	10	0
8	Mrs. Jane Lindup ..	1, Hangleton Court ..	F.	49	17	20	"	23	5	0	24	0	0
9	Wm. Geo. Stephens ..	2, Hole's Road ..	M.	33	17	20	"	7	10	0	8	0	0
10	Mrs. Eliza Newland ..	9, Beaconsfield Terrace	F.	75	18	21	"	21	15	0	22	10	0
11	Charles Muzzle ..	3, Hole's Road ..	M.	37	22	23	Recovery.	5	5	0	6	0	0
12	Charles Dummer ..	7, Hangleton Court ..	M.	69	26	26	Died Aug. 3	14	5	0	14	5	0
13	Thomas Latter ..	9, " "	M.	16	Aug. 3	Aug. 5	Recovery.	28	10	0	29	5	0
14	Thomas Packham ..	5, Camden Street ..	M.	34	9	12	"	15	15	0	16	10	0
15	Richard Earle ..	2, Western Terrace ..	M.	26	20	21	"						

Cost of 13 In-patients amounted to—Maintenance and Attendance, &c. .. £258 0 0
 Ambulance £7 5 9

Total £265 5 9

The actual cost of the thirteen patients at Hangleton Hospital was £265 5s. 9d., or £20 8s. each. There was also £38 8s. given in relief, &c., so that the total cost of the epidemic paid out of the rates for the fourteen Portslade cases who were chargeable amounted to £303 13s. 9d.

The cost of the two Southwick patients in the Hospital was £73 13s. 9d., and in addition there was a sum of £5 15s. 8d. paid to their families for relief, &c., and a sum of £4 1s. 6d. as compensation for bedding and clothing destroyed, making a total of £83 10s. 11d.

The actual total cost of this outbreak in Southwick and Portslade payable out of rates was £387 4s. 8d. Omitting the one private case, the mean cost for each of the remaining sixteen patients was £24 4s.

WATER SUPPLY.

Portslade and Patcham are well supplied with good water from the Brighton Corporation Waterworks.

DRAINAGE AND SEWERAGE.

Nothing was done during the year in carrying out any of the schemes detailed in my last Annual Report.

PORTSLADE.—Up to June last, the cesspools were emptied by, and at the cost, of the owners, the work being carried out by private persons in a most expensive, filthy, and offensive manner, and in many cases, the contents had to be conveyed through dwelling houses by means of buckets. The District Council decided to adopt the system which is carried on at Bexley, Gravesend, and other towns, and known as the “Bexley System.” Two iron water-tight and air-tight vans (300 gallons each), 200 feet of leather hose, one patent sewage force pump, and the necessary accessories were purchased for carrying out the work.

The mode for working this process is as follows :

The cesspool is opened, the contents thoroughly deodorised by means of sulphate of iron, and then stirred up with a long pole, at the end of which is a large fork. The pump is brought as near to the cesspool as possible, the suction hose is lowered to the required depth, the delivery hose then connected between the pump and van, and the sewage forced up into the same. There is a small aperture on the van which is opened for the air to pass out. Over this is a cage containing cotton waste saturated with crude sanitas to deodorise any smell that might arise from this cause. When full, the vans are taken to a neighbouring farm, and the contents are distributed on the land.

	No. emptied.	Labour.			Horse Hire.		
		£	s.	d.	£	s.	d.
June 11th to June 30th	26	5	12	6	9	9	9
Quarter ending Sept. 29th	122	25	9	6	42	15	3
„ „ Dec. 25th	139	23	18	9	40	3	5
Total	287	£55	0	9	£92	8	5

The cost of the sulphate of iron for deodorising the contents was £4.

Two men are constantly employed in the work, the weekly wages for the two amounting generally to £1 19s., or 6s. 6d. a day.

An agreement was made with Mr. Henry Greenyer for horse hire at the rate of 11d. per hour, for the services of one man and one horse; this work was done last quarter at a daily cost of 12s. or £3 12s. per week. The capital outlay is here shown:—

	£	s.	d.
2 vans, each holding 300 gallons	72	0	0
Cost of pump and fittings	15	0	0
30 feet of suction hose	16	0	0
Delivery hose	34	4	0
Hose reel...	8	10	0
Total	£145	14	0

A further sum of £21 was afterwards spent in buying additional hose, thus bringing up the capital outlay to £166 14s.

The probable annual cost will be about £280 for working the system.

A temporary scheme for dealing with the sewerage of Upper Portslade at an estimated cost of £60 was submitted by the Surveyor in the early part of the year for dealing with this difficult problem, by lengthening the present sewer with 9in. glazed stoneware pipes to convey the sewage into two large constructed cesspools, 9 feet diameter by 40 and 45 feet deep, with a new ditch to receive the overflow and storm water. This received the approval of the Council, and the scheme was submitted to Mr. J. Eardley Hall, the owner of the land, but owing to an elaborate agreement on behalf of the owners and tenants, the work was allowed to fall through.

The present ditch has during the past year been considerably deepened at a cost for labour of £14 4s. 1d., and for timber for weir boards of £1 19s. 7d. It is now divided into four sections and each section can be treated with sulphate of iron, so that the nuisance which has previously arisen is abated, as the sewage is deodorized. A duplicate pump has been purchased to enable the ditch to be emptied and cleansed more regularly.

Mr. Taylor Allen, the Surveyor, who has carried out the system very efficiently, is much satisfied with the result.

SYSTEMATIC INSPECTION.

The following is a list of routine work during the year 1896, as recorded in the books of the Sanitary Inspector :—

No. of Houses and Premises inspected	339
No. of Nuisances abated by written notice	35
No. of Nuisances abated by verbal notice	18
Letters written in conjunction with these matters	27
Water certificates granted to new houses	34
Houses cleansed and disinfected	31
Houses whitewashed	28
Cases of overcrowding abated	2
Houses reported unfit for habitation	1
Notices to drain house	2
Earth Closets provided	2
Defective bell traps replaced by gully traps ..	6
W.C.'s foul and defective remedied	3
Samples of water taken for Analysis	2

HOUSE TO HOUSE INSPECTION.

This work has been proceeded with as occasion permitted.

SCAVENGING AND CLEANSING.

The work of scavenging is well done and the streets are kept clean.

The usual contracts were made for removing ashes and house refuse from the houses in Portslade. The Authority requires the house refuse to be removed from the ash pits fortnightly under the supervision of the Inspector of Nuisances. The annual cost is £84.

COWSHEDS AND DAIRIES.

There are 35 Cowsheds and Dairies ; these have been frequently inspected, and with one exception found well kept.

One new Cowstall for 45 Cows has been registered.

BAKEHOUSES.

The 14 Bakehouses are regularly inspected and the regulations enforced.

SLAUGHTER-HOUSES.

There are three Slaughter-Houses which have been inspected at various times.

MARGARINE ACT.

Margarine was found being sold in one place contrary to the clauses of the act; the defendant pleaded ignorance of the law, and the Council decided not to prosecute but to warn the seller. The act has now been complied with, as also in the case of the few grocers who sell it.

NEW HOUSES AND WATER CERTIFICATES.

Forty-one new houses were erected and water certificates granted by the Sanitary Authority under Section 6 of the Public Health (Water) Act, 1878.

Three premises where Benzine is kept have been inspected and licenses have been granted.

PROCEEDINGS BEFORE THE MAGISTRATES.

A summons was issued against the owner of a newly built house for allowing the dwelling to be occupied without first obtaining a water certificate, but owing to an unavoidable circumstance the summons was allowed to be withdrawn on the defendant paying the costs.

A summons was issued against the owner of a house for not giving notice to the Surveyor of the completion of a new dwelling house. Defendant was fined by the Hove Bench £1 and costs.

INQUESTS.

Inquests were held in four cases:—Male, 77 years, accidental fracture of thigh; male, 54 years, lung disease; male, 46 years, accidental fracture of skull by a fall; male, 10 months, pneumonia.

There were no deaths returned as “not certified” during the year.

STEYNING EAST RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the two years, 1895-96.

Year.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1895	75	22	10	4	3	15	21
1896	84	27	5	3	2	25	22

STEYNING EAST RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the twenty years, 1876-95, and in 1896.

Period.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	—	10	1	—	—	4	1	—	2	—	1	5	13	26	—	—	63
1881-85 ...	1	9	6	—	—	5	—	—	1	—	2	4	16	22	2	—	68
1886-90 ..	—	2	2	—	1	3	—	—	—	—	1	1	10	19	2	—	41
1891-95 ...	—	3	12	3	—	3	—	—	—	—	2	12	19	17	3	15	89
1896 ...	2	—	—	—	—	1	—	—	—	—	—	1	2	3	—	—	10
Total ...	3	24	22	3	1	16	1	—	3	—	6	23	60	87	7	15	271

STEYNING EAST RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.			All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Portslade Parish	...		1,473	77	173	130	220	112
Patcham Parish	...		1,092	41	110	93	155	145
Rest of District	...		1,153	41	83	118	173	90
Mean	..	..	1,363	67	152	123	201	113
PERIOD.								
1876-80	..	..	1,274	74	172	125	188	78
1881-85	..	..	1,508	89	165	172	176	166
1886-90	..	..	1,268	31	109	113	219	123
1891-95	..	..	1,404	74	163	84	221	144
1896	..	..	1,263	60	90	30	210	150

(A)—Table of DEATHS during the Year 1896, in the STEYNING E.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (j)	Scarlatina. (k)
Portslade Parish	68	26	5	3	1	19	14	Under 5 5 upwards.		
Patcham Parish	6	—	—	—	—	4	2	Under 5 5 upwards.		
Rest of District	6	1	—	—	1	1	3	Under 5 5 upwards.		
Hangleton Hospital	10	1	2	2	1	1	3	Under 5 5 upwards.	3	
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS.....	90	28	7	5	3	25	22	Under 5 5 upwards.	3	
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	—	1	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto...	7	1	2	2	1	—	1	Under 5 5 upwards.	1	

RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF SMALLPOX, SCARLATINA, DIPHTHERIA, MEMBRANOUS CROUP, AND TYPHUS, REPORTED TO THE SANITARY OFFICER OF HEALTH, during the year 1896, in the STEYNING EASTWARD UNION.

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SMALLPOX COMING TO THE KNOWLEDGE OF THE SANITARY OFFICER					
	Census 1891.	Esti- mated to mid- dle of 1895.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fever. Typhus.	Other.
(a)	(b)	(c)	(d)	(e)						
Portslade Parish	4,220	4,630	152	Under 5 5 upwards.	15	2	7			
Patcham Parish... ..	1,064	1,200	15	Under 5 5 upwards.		1				
Rest of District... ..	758	800	15	Under 5 5 upwards.						
Hangleton Hospital	20	20	—	Under 5 5 upwards.						
				Under 5 5 upwards.						
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F INFECTIOUS SICKNESS, coming to the knowledge of the Medical
ural District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

HORSHAM RURAL DISTRICT.

pp. 41 et seq.

HORSHAM

RURAL DISTRICT COUNCIL.

The population in this district was 13,400 at the census of 1841 and 14,018 in 1851; partly owing to changes in the area, it rose to 17,876 in 1861, and to 19,935 in 1871, and then by steady increases to 22,300 in 1881, and to 24,885 in 1891.

The above figures, however, include the urban district of Horsham, which was formed in 1875, and which had a population of 6,874 in 1881, and 8,087 in 1891; Crawley was added in 1880. The parish of Cowfold was added to this district on the passing of the Local Government Act, 1894; the figures for this parish relate only to 1895-96.

The following figures relate only to the late rural sanitary area:—

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	—	68,798	69,706	71,277
Number of Inhabited Houses ..	2,375	2,713	3,013	3,410
„ Uninhabited „ ..	56	135	177	232
Population	13,022	13,710	15,426	16,798
Males	6,872	7,097	7,915	8,585
Females	6,150	6,613	7,511	8,213
Persons to a House	5.48	5.05	5.12	4.92

The population has increased considerably in Ifield and in Horsham North parishes, while it has changed but slowly in the rest of the district.

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable; also from four diseases which, though formerly included in the zymotic group, are not notifiable; from the frequent diseases, consumption, lung disease, and heart disease; and, lastly, from all causes.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.							Non-notifiable.				Phtisis.	Lung Disease.	Heart Disease.	All Diseases.		
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.					Rheumatic Fever.	
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
West Grinstead	—	5	10	—	—	1	2	1	1	6	5	4	—	32	57	36	419
Shipley ..	—	1	5	—	1	1	—	1	1	2	10	4	—	28	57	20	328
Nuthurst	—	1	1	—	—	—	—	1	—	4	2	3	—	24	37	25	232
Horsham (South)	1	2	5	—	—	—	2	1	—	6	3	4	—	11	34	13	186
Horsham (North)	1	3	7	—	—	—	2	2	1	8	9	13	1	54	128	47	644
Lower Beeding..	—	—	6	—	—	—	—	—	—	2	10	5	—	25	70	22	330
Crawley (1880) ..	—	—	2	—	—	—	—	—	—	3	1	—	—	27	39	3	84
Ifield ..	1	5	13	1	—	—	1	—	2	10	12	9	4	49	104	67	628
Rusper ..	—	1	—	—	—	—	—	—	1	1	1	2	—	14	21	16	139
Warnham	2	1	4	—	—	—	—	—	—	7	9	5	2	23	59	27	292
Slinfold ..	—	1	8	—	—	—	1	—	2	1	3	2	—	24	35	27	238
Itchingfield	—	3	1	—	—	1	—	—	—	—	2	2	—	14	16	9	117
Rudgwick	2	2	3	—	—	2	—	—	2	6	6	2	1	33	60	36	355
Billingshurst	—	—	4	—	—	4	—	—	1	3	11	9	1	62	92	47	507
Total ..	7	25	69	1	2	20	8	8	12	59	84	64	9	420	809	395	4499

By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for Ifield and for each sub-district.

The mean general death-rate for the whole district is 13·9 per 1,000 in the twenty years 1876-95, and there has been no marked variation in each five-year period.

In 1896 the rate of mortality was unusually low.

All deaths occurring in Horsham Workhouse, which is situated inside this district, have been distributed each year to each parish whence the inmate came. It will be seen that the mortality is fairly uniform throughout the various localities.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high. Taking the factor for correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·93960; the *recorded* mean death-rate in Table 3 of 13·94, multiplied by this factor, becomes the *corrected* death-rate of 13·10 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 423 children were registered; of these 210 were male, and 213 were female.

Estimating the population in the middle of the year at 18,760, the birth-rate was equal to 22·54 per 1,000 persons living.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	452 ..	27·9	1892 ..	399 ..	23·4
1888 ..	454 ..	27·8	1893 ..	394 ..	22·8
1889 ..	418 ..	25·3	1894 ..	416 ..	23·9
1890 ..	420 ..	25·2	1895 ..	432 ..	23·3
1891 ..	467 ..	27·8	1896 ..	423 ..	22·5

The mean number of births is 427, and the mean birth-rate is 25·0 per 1,000 of population.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.					Birth-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
South Sub-District ..	86	101	91	79	..	21·3	25·0	22·6	18·7
Ifield Parish ..	65	59	57	65	..	22·6	20·3	19·2	21·4
Rest of North S.D.	150	154	136	160	..	25·8	26·4	23·0	25·5
West Sub-District ..	93	102	115	93	..	22·1	24·2	27·2	21·4
Cowfold Parish ..	—	—	33	26		—	—	36·2	28·9
Total	394	416	432	423		22·8	23·9	23·3	22·5

GENERAL MORTALITY.

There were 225 deaths registered in this district during the year 1896, but from this number must be deducted the deaths of 11 persons in Horsham Workhouse, who came from the Horsham Urban Sanitary District; the remaining 12 workhouse deaths were distributed among the several parishes whence each inmate came, viz., Shipley 1, Nuthurst 1, Horsham 3, Crawley 1, Slinfold 3, and Billingshurst 3, in all 12.

Estimating the population in the middle of the year at 18,760, the death-rate was equal to 11·4 per 1,000 persons living.

In country places throughout England and Wales the mortality in 1896 was equal to 15·3 per 1,000 of population, or 1·9 per 1,000 below the mean rate in the ten years, 1886-95.

The variations in the death-rate during the past ten years in this district are here given :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	209	12·9	1892 ..	289	16·9
1888 ..	219	13·4	1893 ..	235	13·6
1889 ..	213	12·9	1894 ..	204	11·7
1890 ..	210	12·6	1895 ..	267	14·4
1891 ...	240	14·2	1896 ..	214	11·4

Thus the mean annual number of deaths is 230, and the mean annual death-rate is 13·4 per 1,000 of the population. During the same period there were 4,275 births, so that the natural increase of population by excess of births over deaths was 1,975.

In each locality the deaths and death-rate are here shown for the past four years :—

	Deaths.				Death-rate.			
	1893.	1894.	1895.	1896.	1893.	1894.	1895.	1896.
South Sub-District ..	45	62	63	41 ..	11.1	15.4	15.6	9.7
Ifield Parish ..	45	27	41	40 ..	15.6	9.3	13.8	13.1
Rest of North S.D.	82	64	98	65 ..	14.1	11.0	16.6	10.4
West Sub-District ..	63	51	58	59 ..	14.9	12.1	13.7	13.6
Cowfold Parish ..	—	—	7	9 ..	—	—	7.7	10.0
Total ..	235	204	267	214	13.6	11.7	14.4	11.4

In each parish the deaths were thus distributed :—

West Grinstead ..	14	..	Ifield ..	..	40
Shipley ..	12	..	Rusper ..	..	3
Nuthurst ..	8	..	Warnham ..	..	17
Horsham (south) ..	7	..	Slinfold ..	..	14
Horsham (north) ..	33	..	Itchingfield .	..	5
Lower Beeding ..	9	..	Rudgwick ..	..	19
Crawley ..	3	..	Billingshurst	..	21
Cowfold ..	..	..	..	9	
Total ..	..	..	..	..	214

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

				Births.	Deaths under one year.	Ratio to 1000 Births.
South Sub-District	..	..	..	79	7	88
Ifield Parish	..	..	..	65	9	138
Rest of North Sub-District	..	..	..	160	19	118
West Sub-District	..	..	..	93	9	97
Cowfold Parish	..	..	..	26	1	38
Total				423	45	106

The mean annual rate in the previous eight years 1888-95 was 90 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 8 in number in the case of those which are notifiable, and 9 in the other class where the number of cases cannot be obtained. The rate of mortality was therefore equal to 0·91 per 1,000.

				Cases.	Deaths.
	Small Pox	..	..	5	none
	Scarlatina	..	..	16	none
	Diphtheria	..	..	31	5
	Membranous Croup		..	none	none
Fevers.	Typhus	..	..	none	none
	Enteric	..	..	10	3
	Continued	..	..	none	none
	Relapsing	..	..	none	none
	Puerperal	..	..	none	none
	Cholera	..	..	none	none
	Erysipelas	..	..	5	none
	Total	..	..	67	8

In the other class the deaths were as follows :—

Measles	..	..	..	1
Whooping Cough	..	..	..	6
Diarrhoea and Dysentery	..	..	..	1
Rheumatic Fever	..	..	..	1
Total	..	..	..	9

The prevalence in each quarter of each notifiable disease is shown in the following table :

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	5	—	—	5
Scarlatina	4	2	6	4	16
Diphtheria	8	—	1	22	31
Membranous Croup	—	—	2	—	—
Enteric Fever	2	1	—	5	10
Puerperal Fever	—	—	—	—	—
Erysipelas	4	1	—	—	5
Total	18	9	9	31	67

The Infectious Diseases (Notification) Act, 1889, came into operation in this district on April 2nd, 1890, and the number of cases notified were 33 in 1890, 81 in 1891, 54 in 1892, 103 in 1893, 37 in 1894, and 59 in 1895.

SMALL POX.—On April 4th, a case of small pox was notified at West Grinstead. At a lonely spot, called Honeybridge, there are three old cottages in a ruinous state, having been closed some years ago. In

fine weather, these old places are sometimes occupied by tramps. A family named Smith, consisting of the parents, a son 13 years old, and a daughter 9 years old, had been for some time wandering about the county; early in March they had stayed at Worthing at a common lodging house; then they went on to East Sussex, sleeping in a shed at Bewick on March 30th; staying at Lewes on March 31st, at a common lodging house; and they lodged in a barn at Ditchling on April 1st; thence they came to Honeybridge on April 2nd, at which time the boy, 13 years old, first felt ill. He had a severe attack of small pox, but he finally recovered and no one else was attacked. The place in which they lay was without doors, windows or roof, so that practically the lad lay in the open air, and as there was no furniture, some necessary articles were supplied by the Guardians, and the family were fed and maintained under the care of the Relieving Officer. The weather was fine and mild, and the situation was naturally very isolated. The mother nursed the child, and the parents took great care in staying at the old ruin, and avoided wandering about. The source of contagion was not made out, as the history was very imperfect, and the parents did not always know or remember the names of the places through which they passed.

During the month of March there had been several cases of small pox amongst tramps in places along the South Coast, but no one in this family was aware of having seen or come in contact with a case. Each of the four inmates had been vaccinated in infancy, and the children had fair marks.

The man and his wife were re-vaccinated on April 7th, and the girl on April 9th; in the two last cases the re-vaccination proved successful. There were four other tramps in the adjacent ruins on April 5th, but they left on April 6th, and they escaped having the disease, although they had seen the infected child at an early stage.

The expenses incurred by the Horsham Board of Guardians amounted to £4 2s. 9d., and by the Rural District Council to £11 0s. 4½d.

In May there was another small outbreak of small pox, but the history of these cases is given in the report for the Horsham Urban District. In each instance the services of Mr. Moses Brooks proved of great value in checking the spread of the disorder.

There were several other minor appearances of infectious disease in the district but there was no epidemic spread of any other disease.

IFIELD AND CRAWLEY DRAINAGE.

A detailed account of the system and of the farm was given in my last Annual Report,

In the year ending September 30th, 1896, the charge on account of the loan of £2,707 was :—

	Principal Repaid.				Interest.				Total.		
	£	s.	d.		£	s.	d.		£	s.	d.
Ifield ..	72	0	0	..	50	7	3	..	122	7	3
Crawley ..	20	0	0	..	9	4	2	..	29	4	2
Total ..	92	0	0		59	11	5		151	11	5

The yearly receipts and expenditure are here given for the last five years :—

Year ending March 25th.	Receipts.					Expenditure.				Deficit.		
	£	s.	d.			£	s.	d.		£	s.	d.
1892 ..	Nil.			..	..	53	14	1	..	53	14	1
1893 ..	5	10	0	..	..	70	19	1	..	65	9	1
1894 ..	14	0	0	..	..	62	11	4	..	48	11	4
1895 ..	28	14	0	..	..	52	16	8	..	24	2	8
1896 ..	13	6	0	..	..	53	6	7	..	40	0	7

The sale of rye grass brought in £5 10s. for 1893, £12 in 1894, £23 5s. in 1895, and £12 in 1896 ; the sale of sludge brought in £2 in 1894, £5 9s. in 1895, and £1 6s. in 1896. Only one man is employed on the farm ; the labour bill amounts to about £52 a year, besides which there are other expenses for constructing banks, laying out the ground, seeds, tools, &c., which vary from time to time.

The rye grass is sold by tender ; it is cut and removed at the expense of the farmer whose tender is accepted.

The following report is the usual annual one sent in by Mr. Moses Brooks to the Horsham Rural District Council :—

“ I beg to lay before you my report and statement of accounts of the Crawley and Ifield Sewage Farm, for the year ending 25th March, 1896.

“ I am pleased to state that during that time I have received no complaint whatever as to the condition of the effluent water on leaving the sewage farm.

“ The sum received for the rye grass upon the farm, during the past year, was £12, being £11 5s. less than the previous year. This less sum is accounted for, by the fact, that the grass was much later than the previous year, and the severe weather in January and March, 1895, had very much weakened the plants. I would recommend that one portion of the farm be ploughed up next autumn, and new seed sown. Printed bills have been issued inviting tenders for the grass this year,

“ During the past year a large quantity of sludge has been taken from the tanks, but owing to the mild and damp winter of 1895-96 it has not become dry enough to cart away, and only a small portion has been sold, viz., twenty-six loads at 1s. per load. The remaining portion will be easily disposed of as soon as it is dry enough.

“ By constant care and attention, and by frequently cleaning out the tanks, and then passing the sewage over the land, I have been able to keep the effluent water from becoming a nuisance, and to ensure that this is properly attended to I have made 74 visits to the farm during the year.

“ The following is a summary of the receipts and expenditure upon the farm during the year ending March 25th, 1896.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Sale of Rye Grass as				Labour for the year	52	16	4
per tender ..	12	0	0	Tools, &c. ..	0	10	3
Sale of Sludge ..	1	6	0				
	<hr/>						
Total	£13	6	0				
Excess of expendi-							
ture over receipts	£40	0	7				
	<hr/>						
	£53	6	7				
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					£53	6	7
					<hr/>		

STAR ROW DRAINAGE AND WATER SUPPLY.

Star Row is a hamlet in the Parish of Horsham which has increased considerably in recent years, and it is likely to increase still more as building operations are now progressing.

In 1872, when the population was but small, a scheme of drainage was carried out which may have sufficed for that period, but which is now quite inadequate.

This scheme cost about £290. It consisted of two portions, each made of socketed stone ware pipes connected together by pug joints. One portion was laid to the north of the main road from Roffey Corner to the School, and another portion was laid nearly parallel to it on the south side of the road, and it extended as far as the Star Inn. The common meeting point of these drains was at a spot opposite to the School, and to the south of the main road, in a field marked on the Ordnance Map, No. 1,080, whence a main sewer passed in a southerly direction to two tanks in a field where some deposit of solid matter took place, the tanks being cleaned out from time to time.

This system still remains, but it only serves to carry away dirty house water from a small area, and it in no way provides proper drainage for the majority of the houses in Star Row.

The area requiring to be sewered includes the houses along each side of the Crawley Road from the Crossways to Roffey Corner ; from Crossways down the Rusper Road to Little Haven ; from the houses at Little Haven ; and from the houses on each side of Haven Lane.

The number of houses in this area are here shown :—

Crossways to Haven Lane : 42 to on the north side ; the Workhouse and 6 houses on the south side.

Haven Lane to Roffey Corner : 31 houses on the north side and the school ; 52 houses on the south side.

Rusper Road : 9 houses on the west side ; 9 houses on the east side.

At Little Haven : 9 houses.

Haven Lane : 2 houses on the west side ; 28 houses on the east side.

At the Railway Crossing : 7 houses.

Thus the drainage of 195 houses has to be dealt with, and in addition, there is a large Union Workhouse and also a public elementary school.

Besides the above mentioned main sewer, there are at least four outfalls whence the sewage is discharged into ditches without any treatment.

1. The drain from the Workhouse is carried to some brickfields, to the west, where some of the clearer liquid is used for wetting the clay, used in making the bricks.

2. The drain from about 30 houses in Millthorpe Terrace, opposite the Workhouse, discharges into some allotment gardens to the south-west.

3. Along the Rusper Road, the sewage, or overflow water from the cesspits, discharges into an open ditch by the roadside at Little Haven.

4. In Haven Lane, an open ditch receives the drainage from several houses.

In Rusper Road there are eight cottages with earth closets ; the larger houses here have cesspits whence the overflow passes into the drain.

Between the Workhouse and the Crossways, most of the houses have hopper closets, which are handflushed, and the overflow from the cesspits goes into the sewer.

There are 6 houses west of the Village Hall, which have short hopper closets, and there are 5 houses near Roffey Corner which have a similar arrangement, and all these, as well as the School and Village Hall, are connected with the original sewer laid down in 1872.

The rest of the houses are provided on old methods.

WATER SUPPLY.

There is a reservoir east of the Workhouse which is supplied from the waterworks in the Urban District of Horsham. By agreement, the Workhouse and the houses situated to the west of the Star Inn are supplied with good water from this reservoir, and there are eight cottages in Rusper Road where the owner has laid on this water; the nine villas in this road are also provided from the same source.

About sixty houses obtain water from the town supply of Horsham, but there are nearly 140 houses which depend on shallow wells for their water, and some of these are liable to contamination.

The question of the water supply is important, not only for the good health of the population, but also as a means of effectually flushing the drains and sewers. No system of sewerage by water-carriage can be well carried out unless there is available a sufficient supply of water.

In dry weather, many of the wells round Little Haven cease to yield water, and the inmates of the houses there have to obtain some from a distance.

At present, the main sewer from Horsham Urban District is in direct connection with a sewer which extends as far as the "Firs," a spot in the Crawley Road about 200 yards distant from the Crossways.

From the Firs to the Star Inn, the road rises gradually 29 feet, then there is decline of 12 feet to the school, which is the lowest point, and then a rise of 19 feet to Roffey Corner. The extreme east point is 36 feet higher than the road opposite the Firs.

The ground towards Little Haven slopes to the north, and although the villas in Rusper Road might drain into the Horsham main sewer in Crawley Road, yet the houses in Little Haven and those near the Railway Crossing are situated too low, and probably a second sewer would be required for this area, so as to bring it within the main system of Horsham.

I would therefore urge upon the Council the importance of taking into consideration, as early as possible, the two questions of water supply and sewerage for Star Row.

It would be easy to supply the whole area with good water from the Horsham waterworks, and it is also possible to effectually drain the area by connecting it with the main system of sewerage at Horsham.

SYSTEMATIC INSPECTION.

The following is a list of routine work during the year as recorded in the books of Mr. Brooks, the Sanitary Inspector :—

No. of Houses, &c., inspected	.. .. .	1487
No. of Nuisances reported	.. .. .	385
No. of Nuisances abated without notice	.. .. .	251
No. of Nuisances abated with notice	.. .. .	124
No. of Nuisances now in course of abatement	.. .. .	10
Houses reported as unfit for habitation	.. .. .	13
Houses closed by order of Magistrates	.. .. .	10
Houses disinfected	.. .. .	52
Houses cleansed and limewashed	.. .. .	62
Water certificates granted for new houses	.. .. .	66
New wells dug	.. .. .	46
Wells cleaned out	.. .. .	9
Wells closed	.. .. .	2
Houses supplied from Horsham Waterworks	.. .. .	12
No. of samples of water analysed	.. .. .	13
No. of samples of water found polluted	.. .. .	4
Cases of overcrowding reported	.. .. .	10
Cases of overcrowding abated	.. .. .	10
New closets erected	.. .. .	17
New earth closets erected	.. .. .	4
Old closets converted into earth closets	.. .. .	5
Old closets provided with proper cesspits	.. .. .	5
Old closets provided with hopper and trap	.. .. .	4
No. of gully traps put in to replace old bell traps	.. .. .	50
Houses connected with Crawley and Ifield main sewer	.. .. .	17
Houses connected with Warnham main sewer	.. .. .	12
Legal proceedings	.. .. .	4
No of registered cowsheds and dairies. Frequent visits have been made and they are well kept	.. .. .	59
No. of cows	.. .. .	811
No. of slaughter houses. They are well kept, and often limewashed. These are frequently visited.	.. .. .	23
No. of bakehouses. These are often inspected, they are well kept and each bakehouse is lime-washed twice a year...	.. .. .	42

Thirteen houses have been found quite unfit for human habitation. Legal proceedings were taken under the Housing of the Working Classes Act, 1890, and closing orders were obtained for ten houses. One house after being brought to the notice of the owner, was closed without an order, and is now being demolished. In the two other cases notices have been given prior to proceedings being taken. Five houses have since been put in proper repair, and allowed to be occupied again, the other five houses are still in ruins.

Two main sewers have been extended during the last year, viz:—
Ifield and Warnham. At West Green, Ifield, 180yds. of 9in. sewer have been put in the Prince's Road. This has enabled five houses to be redrained and so to abate a nuisance caused by the discharge of sewage into a ditch; also to provide for a number of new cottages now in course of erection.

At Warnham the sewer has been extended in the main street by putting in 150yds. of 9in. sewer, and 20yds. of 5in. sewer. Five houses have already been connected, and this will enable the owner to connect twelve more houses, and to lessen the nuisance caused by the discharge of tap water and sink water into the ditch at the bottom of Friday Street.

NEW HOUSES ERECTED DURING 1896.

Ifield, House. Well, 14ft. deep, 12ft. of water.
 Ifield, Pair of Cottages. Well, 14ft. deep, 11ft. of water.
 Horsham, Villa. Supplied from Horsham Water Works.
 Horsham, Pair of Cottages. Supplied from Horsham Water Works.
 Billingshurst, Cottage. Well, 20ft. deep, 16ft. of water.
 Rudgwick, House. Well, 82ft. deep, 22ft. of water.
 Horsham, Pair of Cottages. Well, 35ft. deep, 29ft. of water.
 West Grinstead, Pair of Cottages. Well, 13ft. deep, 12ft. of water.
 Crawley, Pair of Cottages. Well, 19ft. deep, 16ft. of water.
 Horsham, Pair of Cottages. Well, 15ft. deep, 9ft. of water.
 Ifield, Pair of Cottages. Well, 24ft. deep, 18ft. of water.
 Horsham, Pair of Cottages. Well, 29ft. deep, 14ft. of water.
 Ifield, Three Cottages. Well, 17ft. deep, 7ft. of water.
 Ifield, Cottage. Well, 17ft. deep, 8ft. of water.
 Slinfold, Pair of Cottages. Well, 52ft. deep, 15ft. of water.
 Horsham, Pair of Cottages. Supplied from Horsham Water Works.
 Rusper, Cottage. Rain water tank, for 1,000 gallons and a dipping pond.
 Warnham, Block of 3 Cottages. Well, 22ft. deep, 13ft. of water.
 Horsham, Villa. Supplied from Horsham Water Works.
 Ifield, House. Well, 25ft. deep, 8ft. of water.
 Slinfold, Pair of Cottages. Well, 24ft. deep, 9ft. of water.
 West Grinstead, Pair of Cottages. Well, 20ft. deep, 6ft. of water.
 Ifield, Pair of Cottages. Well 13ft. deep, 8ft. of water.
 Slinfold, Villa. Well, 14ft. deep, 6ft. of water and a rain water tank.
 Billingshurst, Cottage. Well, 20ft. deep, 14ft. of water.
 Cowfold, Pair of Villas. Well, 28ft. deep, 14ft. of water.

Ifield, Villa. Well, 24ft. deep, 5ft. of water, rain water tank holding 1,800 gallons.
 Ifield, Pair of Cottages. Well, 18ft. deep, 8ft. of water.
 Ifield, Pair of Cottages. Well, 18ft. deep, 9ft. of water.
 Horsham, Pair of Cottages. Supplied from Horsham Water Works.
 Warnham, House. Well, 54ft. deep, 30ft. of water, and rain water tank.
 Slinfold, Cottage. Well, 34ft. deep, 20ft. of water.
 Lower Beeding, House. Well, 25ft. deep, 20ft. of water.
 Slinfold, Cottage. Well, 30ft. deep, 9ft. of water.
 Horsham, Pair of Cottages. Well, 35ft. deep, 22ft. of water.
 Horsham, Cottage. Well, 14ft. deep, 5ft. of water.
 Slinfold, Cottage. Well, 29ft. deep, 8ft. of water, rain water tank holding 400 gallons.
 Ifield, House. Well, 18ft. deep, 12ft. of water, rain water tank.
 Itchingfield, Cottage. Well, 28ft. deep, 20ft. of water.
 West Grinstead, House. Well, 36ft. deep, 22ft. of water.
 Horsham, Pair of Cottages. Supplied from Horsham Water Works.
 Ifield, House. Well, 15ft. deep, 9ft. of water, and a well 14ft. deep, and 8ft. of water.
 Itchingfield, Cottage. Well, 28ft. deep, 18ft. of water.

RAINFALL.

This table showing the rainfall in each month has been kindly sent to me by H. Padwick, Esq., M.A., who has made similar observations for many years :—

	1896.			1895.		1894.
	Fall in inches.	No. of Rainy days.		Fall in inches.		Fall in inches.
January ..	1·07	.. 10	..	2·94	..	4·83
February	0·45	.. 7	..	0·38	..	2·26
March ..	3·49	.. 20	..	2·33	..	1·89
April ..	0·41	.. 9	..	2·28	..	3·28
May ..	0·35	.. 2	..	0·34	..	2·05
June ..	3·05	.. 12	..	0·28	..	2·51
July ..	1·81	.. 9	..	3·91	..	6·92
August ..	2·42	.. 13	..	3·57	..	2·69
September	7·41	.. 23	..	0·55	..	2·60
October ..	4·77	.. 19	..	4·35	..	3·64
November	1·95	.. 10	..	7·17	..	6·97
December	5·83	.. 19	..	3·26	..	2·54
	33·01	153		31·36		42·18

Year.					Fall in inches.	No. of Rainy days.
1896	..	..	..	..	33·01	.. 153
1895	..	..	..	..	31·36	.. 153
1894	..	..	..	..	42·18	.. 189
1893	..	..	..	..	25·06	.. 156
1892	..	..	..	..	27·53	.. 161
1891	..	..	..	..	34·84	.. 178
1890	..	..	..	..	25·37	.. 143

Diameter of funnel, 8 inches ; above sea level, 140 feet.

INQUESTS.

Inquests were held in twenty-seven cases :—Female, 4 months, effusion of water on the brain ; male, 79 years, brain disease ; female, 30 years, heart disease ; male, 75 years, accidental fall ; male, 72 years, heart disease ; male, 10 weeks, accidentally suffocated in bed ; male, 5 weeks, failure of heart's action ; male, 4 months, accidentally suffocated in bed ; female, 57 years, heart disease ; male, 76 years, heart disease ; male, newly-born, suffocated ; female, 2 days, convulsions ; male, 6 months, congestion of lungs ; male, newly-born, want of proper attention at birth ; male, 52 years, suicide by drowning ; female, 78 years, chronic bronchitis ; male, 49 years, suicide on the railway ; female, 10 months, convulsions ; female, 21 years, excessive vomiting and diarrhœa caused by eating unwholesome rabbit pie ; male, 68 years, suicide by hanging ; male, 10 days, bronchitis ; female, 55 years, cancer of bowels ; female, 72 years, accidental fall ; male, 1 year, accidentally suffocated ; female, 43 years, heart disease ; male, 40 years, found drowned ; male, 77 years, apoplexy.

There were three deaths returned as “not certified” during the year :—Male, 2 days, premature birth ; male, 71 years, heart disease ; male, 59 years, heart disease.

HORSHAM RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95.

Period.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85 ...	1,042	189	93	57	55	318	330
1886-90 ...	1,142	223	110	76	60	280	393
1891-95 ...	1,235	197	102	70	63	346	457
Per 1,000 ...	1,000	178	89	60	52	276	345
1896 ...	214	45	14	11	9	56	79

TABLE 2.—Showing the Deaths from various causes in the twenty-years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	1	9	9	—	—	9	3	—	3	—	—	17	23	19	1	—	94
1881-85 ...	—	4	29	—	1	3	3	—	4	—	6	5	20	16	4	—	95
1886-90 ..	1	9	11	—	1	3	2	—	—	—	2	27	28	21	2	3	110
1891-95 ...	5	3	20	1	—	5	—	—	1	—	4	10	13	8	2	41	113
1896 ...	—	—	5	—	—	3	—	—	—	—	—	1	6	1	1	3	20
Total ...	7	25	74	1	2	23	8	—	8	—	12	60	90	65	10	47	432

HORSHAM RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
South Sub-District ...	1,431	60	65	122	227	115
Ifield Parish	1,298	58	72	101	215	138
Rest of North S. D. ...	1,341	31	71	131	286	103
West Sub-District ...	1,499	49	60	164	250	146
Mean	1,394	48	68	132	251	122
PERIOD.						
1876-80	1,418	46	81	163	274	110
1881-85	1,329	64	57	123	233	100
1886-90	1,399	36	95	148	225	127
1891-95	1,430	45	39	96	274	151
1896	1,140	43	48	69	154	186

(A)—Table of DEATHS during the Year 1896, in the HORSHAM

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox.	Scarlatina.
South Sub-District	37	7	3	3	1	7	16	Under 5 5 upwards.	.....	.....
Ifield Parish	40	9	5	2	1	7	16	Under 5 5 upwards.	.....	.....
Rest of North Sub-District ...	63	19	2	3	4	21	14	Under 5 5 upwards.	.....	.....
West Sub-District	53	9	3	1	3	16	21	Under 5 5 upwards.	.....	.....
Cowfold Parish	9	1	1	2	—	2	3	Under 5 5 upwards.	.....	.....
Horsham Workhouse	23	—	—	—	—	5	18	Under 5 5 upwards.	.....	.....
								Under 5 5 upwards.	.....	.....
								Under 5 5 upwards.	.....	.....
								Under 5 5 upwards.	.....	.....
								Under 5 5 upwards.	.....	.....
TOTALS.....	225	45	14	11	9	58	88	Under 5 5 upwards.	.....	.....
The subjoined numbers have also to be taken in										
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.	.....	.....
Deaths occurring within the District among persons not belonging thereto...	11	—	—	—	—	2	9	Under 5 5 upwards.	.....	.....

RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF DISEASE REPORTED TO THE OFFICER OF HEALTH, during the year 1896, in the HORSHAM SANITARY DISTRICT.

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF : COMING TO THE KNOWL				
	Census 1891.	Esti- mated to mid- dle of 1895.			1	2	3	4	5
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEB Typhus.
(a)	(b)	(c)	(d)	(e)					
South Sub-District	4,051	4,212	79	Under 5 5 upwards.	..... 1	2 5	..... 4	.....	.....
Ifield Parish	2,817	3,042	65	Under 5 5 upwards.	.....	.....	1 4	.....	.....
Rest of North Sub-District ...	5,568	6,080	157	Under 5 5 upwards.	..... 4	2 5	..... 14	.....	.....
West Sub-District	4,180	4,337	93	Under 5 5 upwards.	.....	..... 2	1.....	.....	.....
Cowfold Parish... ..	—	900	26	Under 5 5 upwards.	.....	.....	..... 7	.....	.....
Horsham Workhouse	182	189	3	Under 5 5 upwards.	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....
TOTALS	16,798	18,760	423	Under 5 upwards.	..... 5	4 12	2 29	.....	.....

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
 Bureau of the District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

PETWORTH RURAL DISTRICT.

pp. 63 et seq.

PETWORTH RURAL DISTRICT.

The population in this registration district was 9,680 at the census of 1841 and 9,629 in 1851 ; chiefly owing to changes in the area, it rose to 10,065 in 1861, but since 1871 there has been a steady decline.

The following figures relate to the present rural sanitary area which is co-extensive with the registration district.

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	—	44,747	45,701	45,738
Number of Inhabited Houses ..	1,970	2,010	1,995	2,000
„ Uninhabited „ ..	72	64	120	119
Population	10,065	10,147	9,594	9,431
Males	5,213	5,296	4,857	4,711
Females	4,852	4,851	4,737	4,720
Persons to each House ..	5.11	5.05	5.81.	4.71

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish ; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable ; also from four diseases which, though formerly included in the zymotic group, are not notifiable ; from the frequent diseases, consumption, lung disease, and heart disease ; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.							Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.		
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.			Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.					Rheumatic Fever.	
					Typhus.	Enteric.	Continued.										Puerperal.
Wisborough Green	—	—	6	—	—	3	—	1	2	4	—	—	43	93	44	495	
Northchapel	—	—	10	—	—	—	—	1	—	—	—	—	31	47	24	269	
Kirdford	—	—	15	—	—	3	—	—	1	3	1	—	43	103	31	497	
Petworth	1	7	11	—	—	10	—	4	7	22	9	1	97	146	91	979	
Egden	—	—	1	—	—	1	—	—	—	—	1	—	—	2	2	22	
Fittleworth	—	—	6	—	—	—	—	—	—	1	3	3	20	34	29	233	
Stopham	—	—	2	—	—	—	—	—	—	—	—	—	3	7	3	40	
Coates	—	—	—	—	—	3	—	—	—	—	—	1	1	3	1	21	
Burton	—	—	—	—	—	—	—	—	—	—	—	—	3	4	3	24	
Duncton	—	—	—	—	—	—	—	—	—	—	—	—	5	15	11	63	
Barlavington	—	—	—	—	—	—	—	—	—	2	1	—	2	6	4	33	
Sutton	1	—	1	—	—	—	—	—	—	—	1	1	8	17	16	100	
Bignor	—	—	2	—	—	—	—	—	—	2	2	—	5	4	8	50	
Bury	—	2	9	—	—	—	—	—	—	2	2	2	7	23	25	177	
Total	2	9	63	—	—	20	—	4	6	10	39	20	5	268	504	292	3,003

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for Petworth Parish and for each Sub-District.

The mean general death-rate for the whole district is 15·70 per 1,000 in the twenty years, 1876-95, and there has been a gradual reduction in the rate from 16·09 in the first five, to 15·19 in the last five-year period.

In 1896 the rate of mortality was unusually low.

All deaths in Petworth and Wisborough Green Workhouses have been distributed each year to each parish whence the inmate came. The mortality is fairly uniform throughout the whole area, but lung disease is more common in the northern parishes which form a cold and wet clay area.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high.

Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·87329; the *recorded* mean death-rate in Table 3 of 15·70, multiplied by this factor, becomes the *corrected* death-rate of 13·71 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 244 children were registered; of these 128 were male, and 116 were female.

Estimating the population in the middle of the year at 9,380, the birth-rate was equal to 26·0 per 1,000 persons living.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	264 ..	27·6	1892 ..	214 ..	22·7
1888 ..	240 ..	25·3	1893 ..	251 ..	26·7
1889 ..	263 ..	27·7	1894 ..	227 ..	24·1
1890 ..	223 ..	23·5	1895 ..	202 ..	21·5
1891 ..	251 ..	26·6	1896 ..	244 ..	26·0

The mean number of births is 238, and the mean birth-rate is 25·2 per 1,000 of population.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.					Birth-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
North Sub-District ..	109	96	89	116	..	27·2	24·0	22·2	29·4
Petworth Parish ..	73	67	55	68	..	25·5	23·5	19·3	23·9
Rest of South S.D.	69	64	58	60	..	27·0	25·0	22·6	23·1
Total	251	227	202	244		26·7	24·1	21·5	26·0

GENERAL MORTALITY.

There were 129 deaths registered in this district during the year 1896 ; of these 7 took place in Petworth Workhouse, 7 in Wisborough Green Workhouse, and 1 in Petworth Cottage Hospital. These deaths have been distributed amongst the several parishes whence each inmate came, viz., Kirdford 3, Petworth 6, Fittleworth 4, Coates 1, Bury 1, in all 15.

Estimating the population in the middle of the year at 9,380, the death-rate was equal to 13·7 per 1,000 persons living.

In country places throughout England and Wales the mortality in 1896 was equal to 15·3 per 1,000 of population, a rate 1·9 per 1,000 below the mean rate in the ten years, 1886-95.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	131 ..	13·7	1892 ..	163 ..	17·3
1888 ..	143 ..	15·0	1893 ..	129 ..	13·7
1889 ..	142 ..	14·9	1894 ..	116 ..	12·3
1890 ..	136 ..	14·3	1895 ..	154 ..	16·4
1891 ...	153 ..	16·2	1896 ..	129 ..	13·7

Thus there have been during the above period 1,396 deaths and a mean mortality of 14·7 per 1,000. During the same period there were 2,379 births, so that the natural increase of population by excess of births over deaths was 983.

In each locality the deaths and death-rate for the past four years are here shown :—

	Deaths.				Death-rate.			
	1893.	1894.	1895.	1896.	1893.	1894.	1895.	1896.
North Sub-District ..	52	52	65	60	13.0	13.0	16.2	15.2
Petworth Parish ..	38	35	50	37	13.3	12.9	17.5	13.0
Rest of North S.D. ..	39	29	39	32	15.3	11.3	15.2	12.3
Total ..	129	116	154	129	13.7	12.3	16.4	13.7

In each parish the deaths in 1896 were thus distributed :—

Wisborough Green ..	32	..	Coates ..	1
Northchapel ..	8	..	Burton ..	none
Kirdford ..	20	..	Duncton ..	none
Petworth ..	37	..	Barlavington ..	2
Egdean ..	1	..	Sutton ...	2
Fittleworth ..	20	..	Bignor ..	2
Stopham ..	none	..	Bury ...	4
Total ..	129			

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

	Deaths under one year.	Ratio to 1000 Births.
	Births.	
North Sub-District ..	116	86
Petworth Parish ..	68	88
Rest of South Sub-District ..	60	117
Total ..	244	94

The mean annual rate in the previous eight years, 1888-95, was 85 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

There were nine deaths from zymotic diseases, of which three were among notifiable diseases and six in the other class. The rate of mortality was therefore equal to 0.96 per 1,000,

				Cases.	Deaths.
	Small Pox	..	..	1	none
	Scarlatina	..	..	6	none
	Diphtheria	..	..	16	3
	Membranous Croup	..	..	none	none
Fevers.	Typhus	..	..	none	none
	Enteric	..	..	1	none
	Continued	..	..	none	none
	Relapsing	..	..	none	none
	Puerperal	..	..	none	none
	Cholera	..	..	none	none
	Erysipelas	..	..	6	none
	Total	..	..	30	3

In the other class the deaths were as follows:—

Measles	..	..	..	2
Whooping Cough	..	..	..	3
Diarrhoea and Dysentery	..	..	..	none
Rheumatic Fever	..	..	..	1
Total	..	..	..	6

The Infectious Diseases (Notification) Act, 1889, came into operation in this district on February 2nd, 1891.

There were 44 cases notified in 1891; 49 in 1892; 60 in 1893; 53 in 1894; and 37 in 1895.

The prevalence in each quarter of 1896 of each notifiable disease is shown in the following table:

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	—	—	1	1
Scarlatina	4	—	1	1	6
Diphtheria	10	2	4	—	16
Enteric Fever	1	—	—	—	1
Puerperal Fever	—	—	—	—	—
Erysipelas	2	—	1	3	6
Total	17	2	6	5	30

SYSTEMATIC INSPECTION.

The following is a list of routine work during the year 1896, as recorded in the books of the Sanitary Inspector, Mr. F. Whitcomb.

No. of Houses visited	..	..	..	476
No. of Nuisances reported	..	..	..	186
No. of Nuisances abated	..	..	..	186
No. of Nuisances abated without notice	..	..	..	80

No. of Notices served	96
Houses cleansed and disinfected	40
Houses cleansed and limewashed	83
New closets erected	36
Old closets converted	40
Wells sunk	11
Wells cleansed	45
Samples of water collected and analysed	30
No. of infectious cases removed to Isolation Hospital	none
Water certificates granted for new houses	6
Overcrowding cases reported	none
Overcrowding cases abated	none
New houses built	6

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These are twenty-five in number, and they have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and lime washed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

COWSHEDS AND DAIRIES.

These are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

SLAUGHTER HOUSES.

These are nine in number and they are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so there is no difficulty in keeping them clean and tidy. Each slaughter house is often lime washed, and the blood is generally removed at once for use in a garden.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

COMMON LODGING HOUSES.

There is one common lodging-house in the district and this has been kept clean.

ARTICLES OF FOOD.

No cases occurred in which it was necessary to condemn meat or any other article of food.

INQUESTS.

Inquests were held in eleven cases :—Male, 5 months, pneumonia ; male, 33 years, consumption ; male, 2 months, accidentally suffocated in bed ; male, 85 years, heart disease ; male, 79 years, heart disease ; male, 50 years, syncope ; male, 3 years, accidentally scalded ; female, newly-born, debility ; female, 74 years, heart disease ; male, 19 years, accidental fall from a waggon ; female, 83 years, heart disease.

There were two deaths returned as “not certified” during the year :—Female, 10 years, epileptic fit ; female, 74 years, heart disease.

PETWORTH RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95, and in 1896.

Period.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85 ...	749	109	57	34	39	222	288
1886-90 ...	754	102	47	32	39	226	308
1891-95 ...	715	102	46	33	25	205	304
Per 1,000 ...	1,000	141	68	45	46	294	406
1896 ...	129	23	6	7	7	33	53

PETWORTH RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the twenty-years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	1	6	25	—	—	6	—	—	4	—	—	4	8	6	3	—	63
1881-85 ...	—	1	10	—	—	5	—	—	—	—	4	—	7	6	1	—	34
1886-90 ..	—	2	14	—	—	7	—	—	—	—	2	4	8	6	—	—	43
1891-95 ...	1	—	14	—	—	2	—	—	—	—	—	2	16	2	1	34	72
1896 ...	—	—	3	—	—	—	—	—	—	—	—	2	3	—	1	—	9
Total ...	2	9	66	—	—	20	—	—	4	—	6	12	42	20	6	34	221

PETWORTH RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
North Sub-District ...	1,538	50	20	143	296	121
Petworth Parish ...	1,688	60	67	167	286	157
Rest of South S. D. ...	1,526	56	38	108	230	204
Mean	1,570	54	39	139	263	153
PERIOD.						
1876-80	1,609	86	43	155	283	110
1881-85	1,568	42	29	144	264	159
1886-90	1,584	52	38	146	245	174
1891-95	1,519	36	45	113	261	168
1896	1,375	32	64	106	149	318

(A) —Table of DEATHS during the Year 1896, in the PETWORTH

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox.	Scarlatina.
North Sub-District	57	10	1	5	3	16	22	Under 5 5 upwards.		
Petworth Parish	31	4	2	2	3	10	10	Under 5 5 upwards.		
Rest of South Sub-District ...	26	7	3	—	—	5	11	Under 5 5 upwards.		
Petworth Workhouse	7	2	—	—	—	2	3	Under 5 5 upwards.		
Wisborough Green Workhouse	7	—	—	—	—	—	7	Under 5 5 upwards.		
Petworth Cottage Hospital ..	1	—	—	—	1	—	—	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS.....	129	23	6	7	7	33	53	Under 5 5 upwards.		
The subjoined numbers have also to be taken in										
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto...	—	—	—	—	—	—	—	Under 5 5 upwards.		

RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

count in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF SCARLATINA, DIPHTHERIA, MEMBRANOUS CROUP, AND TYPHUS, REPORTED TO THE OFFICE OF HEALTH, during the year 1896, in the PETWORTH SUB-DISTRICT.

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF S COMING TO THE KNOWLI				
	Census 1891.	Esti- mated to mid- dle of 1895.			1	2	3	4	5
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEB Typhus.
(a)	(b)	(c)	(d)	(e)					
North Sub-District	3,983	3,910	116	Under 5 5 upwards.		2 3	1 3		
Petworth Parish	2,831	2,800	68	Under 5 5 upwards.			2		
Rest of South Sub-District ...	2,545	2,600	60	Under 5 5 upwards.	1	1	9		
Petworth Workhouse... ..	33	34	—	Under 5 5 upwards.					
Wisborough Green Workhouse	36	32	—	Under 5 5 upwards.					
Petworth Cottage Hospital ...	3	4	—	Under 5 5 upwards.					
				Under 5 5 upwards.					
				Under 5 5 upwards.					
				Under 5 5 upwards.					
				Under 5 5 upwards.					
				Under 5 5 upwards.					
TOTALS	9,431	9,380	244	Under 5 5 upwards.	1	2 4	2 14		

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
 District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

THAKEHAM RURAL DISTRICT.

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THAKEHAM RURAL DISTRICT.

The population in this registration district was 7,765 at the census of 1841 and 7,434 in 1851 ; chiefly owing to alterations in area, it rose to 8,036 in 1861, but since 1871 there has been a steady decline in the number living.

The following figures relate to the present rural sanitary area which is co-extensive with the registration district.

		1861.	1871.	1881.	1891.
Area in Statute Acres	..	—	40,025	40,636	40,636
Number of Inhabited Houses	..	1,590	1,689	1,652	1,610
„ Uninhabited „	..	64	79	131	113
Population	... ..	8,036	8,335	8,285	8,049
Males	.. ..	4,121	4,274	4,247	4,194
Females	.. ..	3,915	4,061	4,038	3,855
Persons to each House	..	5·05	4·93	5·01	5·00

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish ; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable ; also from four diseases which, though formerly included in the zymotic group, are not notifiable ; from the frequent diseases, consumption, lung disease, and heart disease ; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.							Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.			Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.					
					Typhus.	Enteric.	Continued.									Puerperal.	Erysipelas.
North Stoke	—	—	—	—	—	—	—	—	—	2	—	—	5	5	3	31
Amberley	—	4	1	—	—	—	—	—	3	4	5	2	13	46	11	192
Rackham	—	—	—	—	—	—	—	—	—	3	1	—	3	11	9	55
Greatham	—	—	2	—	—	—	—	—	—	—	—	—	—	5	1	12
Hardham	—	—	1	—	—	—	—	—	—	1	—	1	1	4	3	33
Cold Waltham	—	—	1	—	—	1	—	—	—	6	1	—	19	17	16	143
Wiggonholt	—	—	—	—	—	—	—	—	—	1	—	—	—	2	—	6
Pulborough	—	7	15	—	—	4	—	1	2	11	6	2	55	93	61	590
West Chiltington	—	—	7	—	—	1	—	—	1	6	3	—	18	37	22	195
Parham...	—	—	—	—	—	—	—	—	—	—	—	—	2	5	4	22
Storrington	—	3	7	—	—	5	—	2	1	7	3	—	43	76	35	384
Sullington	—	2	—	—	—	—	—	1	—	3	1	—	2	6	5	45
Thakeham	—	1	—	—	—	1	—	—	1	4	2	—	9	31	14	129
Warminghurst	—	3	—	—	—	—	—	—	—	1	2	—	1	3	3	30
Ashington	—	—	—	—	—	2	—	1	—	2	3	—	9	19	7	87
Wiston ..	—	1	1	—	—	—	—	—	—	4	—	—	5	13	7	78
Washington	1	1	11	—	—	3	—	—	1	8	3	—	19	37	20	243
Findon ..	—	3	6	1	—	2	—	—	1	6	3	—	17	26	19	187
Total ..	1	25	52	1	2	19	—	6	13	69	33	5	221	436	240	2462

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for the chief Parishes and for each Sub-District.

The mean general death-rate for the whole district is 14·98 per 1,000 in the twenty years, 1876-95, and there has been a gradual reduction in the rate from 15·63 in the first five, to 13·89 in the third five-year period, but since then there has been a rise.

In 1896 the rate of mortality was unusually low.

All deaths in Thakeham Workhouse have been distributed each year to each parish whence the inmate came.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high.

Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·86429; the *recorded* mean death-rate in Table 3 of 14·98, multiplied by this factor, becomes the *corrected* death-rate of 12·95 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 185 children were registered; of these 102 were male, and 83 were female.

Estimating the population in the middle of the year at 8,000, the birth-rate was equal to 23·1 per 1,000 persons living.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	246 ..	29·7	1892 ..	185 ..	23·0
1888 ..	230 ..	28·0	1893 ..	207 ..	25·9
1889 ..	232 ..	28·4	1894 ..	188 ..	23·5
1890 ..	210 ..	25·9	1895 ..	197 ..	24·6
1891 ..	223 ..	27·7	1896 ..	185 ..	23·1

The mean number of births is 210, and the mean birth-rate is 26·0 per 1,000 of population.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

		Births.					Birth-rate.			
		1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Amberley Parish	..	18	9	13	14	..	34·6	17·0	25·0	26·9
Pulborough Parish	..	61	51	46	39	..	34·1	28·3	25·5	21·7
Rest of Pulborough S.D.		37	34	45	41	..	26·0	24·1	31·9	29·1
Storrington Parish	..	24	37	18	29	..	19·0	29·3	14·3	23·0
Washington Parish	..	17	19	21	19	..	20·2	22·3	24·7	22·3
Rest of Washington S.D.		50	38	54	43	..	23·0	17·6	25·0	19·9
Total		207	188	197	185	..	25·9	23·5	24·6	23·1

There has been a steady decline in the birth-rate during the last twenty years ; young people leave the villages and find employment in large towns, for it is useless for them to remain at home, where there can be no demand for work.

GENERAL MORTALITY.

There were 199 deaths registered in this district during the year 1896.

Estimating the population in the middle of the year at 8,000, the death-rate was equal to 12·3 per 1,000 persons living.

In country places throughout England and Wales the mortality in 1896 was equal to 15·3 per 1,000 of population.

There were 11 deaths in Thakeham Workhouse, and these have been distributed among the several parishes whence each inmate came, viz., Pulborough 1, West Chiltington 3, Storrington 3, Thakeham 1, Ashington 1, Washington 2 ; in all 11.

The variations in the death-rate during the past ten years are here shown :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	123 ..	14·9	1892 ..	146 ..	18·2
1888 ..	106 ..	12·9	1893 ..	121 ..	15·1
1889 ..	127 ..	15·5	1894 ..	136 ..	17·0
1890 ..	101 ..	12·4	1895 ..	124 ..	15·5
1891 ...	126 ..	15·6	1896 ..	99 ..	12·3

Thus there have been during the above period 1,209 deaths and a mean mortality of 14·9 per 1,000. During the same period there were 2,103 births, so that the natural increase of population by excess of births over deaths was 894.

In each locality the deaths and death-rate for the past four years are here shown :—

	Deaths.					Death-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Amberley Parish ..	9	6	9	12	..	17·3	11·5	17·3	23·1
Pulborough Parish ..	31	37	34	15	..	17·3	20·5	18·9	8·3
Rest of Pulborough S.D.	23	24	26	31	..	16·2	17·0	18·4	22·0
Storrington Parish ..	15	22	14	15	..	11·9	17·0	11·1	11·9
Washington Parish ..	17	13	16	9	..	20·2	15·3	18·8	10·6
Rest of Washington S.D.	26	34	25	17	..	12·0	15·7	11·6	7·9
Total ..	121	136	124	99		15·1	17·0	15·5	12·3

In each parish the deaths in 1896 were thus distributed :—

North Stoke ..	..	none	..	Parham ..	..	none
Amberley ..	..	12	..	Storrington ..	..	15
Rackham ..	..	3	..	Sullington ..	..	1
Greatham ..	..	1	..	Thakeham ..	..	5
Hardham ..	..	none	..	Warminghurst ..	..	1
Cold Waltham ..	..	12	..	Ashington ..	..	1
Wiggonholt ..	..	1	..	Wiston ..	..	4
Pulborough ..	..	15	..	Washington ..	..	9
West Chiltington ..	..	14	..	Findon ..	..	5
Total ..			..	99		

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

				Deaths under	Ratio to	
				Births.	one year.	1,000 Births.
Amberley Parish	..	..	..	14	2	143
Pulborough Parish	..	..	..	39	3	77
Rest of Pulborough Sub-District	..		..	41	4	97
Storrington Parish	..	..	..	29	1	34
Washington Parish	..	..	..	19	1	53
Rest of Washington Sub-District				43	1	23
				<hr/>	<hr/>	<hr/>
Total	..	..		185	12	70

The mean annual rate in the previous eight years, 1888-95, was 84 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were five in the case of those which are notifiable, and three in the other class where the number of cases cannot be obtained. The rate of mortality was therefore equal to 1·00 per 1,000.

				Cases.	Deaths.
	Small Pox	..	..	none	none
	Scarlatina	..	..	16	none
	Diphtheria	..	..	18	4
	Membranous Croup		..	1	1
Fever.	Typhus	..	..	none	none
	Enteric	..	..	4	none
	Continued	..	..	none	none
	Relapsing	..	..	none	none
	Puerperal	..	..	none	none
	Cholera	..	..	none	none
	Erysipelas	..	..	5	none
	Total	..	..	44	5

In the other class the deaths were as follows:—

	Deaths.
Measles	2
Whooping Cough	none
Diarrhoea and Dysentery	1
Rheumatic Fever	none
Total ..	3

The Infectious Disease (Notification) Act, 1889, came into operation on January 1st, 1890, and the number of cases notified were 36 in 1890, 34 in 1891, 21 in 1892, 43 in 1893, 41 in 1894, and 69 in 1895.

The prevalence in each quarter of 1896 of each notifiable disease is shown in the following table:—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	—	—	—	—
Scarlatina	—	—	15	1	16
Diphtheria	12	—	1	5	18
Membranous Croup	—	—	1	—	1
Enteric Fever ..	—	—	3	1	4
Puerperal Fever ..	—	—	—	—	—
Erysipelas	2	—	3	1	6
Total ..	14	—	23	8	45

The epidemic of diphtheria which occurred in the autumn of 1895 in the parishes of Washington and Findon, as detailed in my last Annual Report, died out in January, 1896, and after that time a few isolated cases appeared in various parts of the district, but there was no further spread.

At Amberley 13 cases of scarlatina were notified at the end of August and early in September; in one family, where the children did not go to school, but were taught at home, there were 5 mild cases, and these were isolated; in the other instances the children were apparently in good health and played about as usual; the public elementary school was closed for a week, and then it was re-opened, there was no spread of the disease.

The district was, in fact, very free during the year from any notifiable disease.

WATER SUPPLY AND DRAINAGE.

These are in the same condition as detailed in my Annual Report for 1891, so that they need not be repeated here. There are no public waterworks, and the people have to rely on shallow or deep wells, springs, and rain-water tanks. There is often a scarcity of water in dry summers for houses built on the chalk Downs, and then water has to be obtained from a long distance. The supply of water in this district is, with the above exception, good as regards quantity and quality.

SCAVENGING AND CLEANSING.

In the Parish of Storrington the contractor collects the ashes and empties all pail closets every Saturday morning.

COWSHEDS AND DAIRIES.

The sixteen cowsheds are in most cases well kept, care being taken that there is good water, ventilation, light, and frequent limewashing.

SLAUGHTER HOUSES.

The twelve slaughter houses are kept in a fair condition.

BAKEHOUSES.

The fifteen bakehouses have been often inspected, and they are kept in a clean condition.

INQUESTS.

Inquests were held in twelve cases:—Female, 75 years, brain disease; male, 76 years, brain disease; male, 9 months, convulsions; male, 7 weeks, exhaustion accelerated by improper feeding; male, newly-born, premature birth; male, 35 years, found drowned in the river Arun; female, 3 years, accidentally drowned in a well of water; female, 2 years, accidentally scalded; male, 14 years, accidentally drowned whilst bathing in the river Arun; male, 50 years, found drowned; female, 1 year 11 months, drowned by falling into a dipping pond; male, 43 years, accident on railway, struck by an engine.

There were no deaths returned as “not certified” during the year.

THAKEHAM RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95, and in 1896.

Year.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85 ...	583	80	58	30	27	182	206
1886-90 ...	575	85	56	23	28	166	217
1891-95 ...	653	90	40	43	36	183	261
Per 1,000 ...	1,000	141	85	53	50	293	378
1896 ...	99	13	12	3	2	28	41

THAKEHAM RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the twenty years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	—	11	1	—	1	2	—	—	—	—	3	4	39	11	1	—	73
1881-85 ...	—	8	13	—	1	4	—	—	2	—	5	1	5	5	1	—	45
1886-90 ..	1	5	16	—	—	6	—	—	4	—	4	3	14	9	—	4	66
1891-95 ...	—	1	22	1	—	7	—	—	—	—	1	2	11	8	3	31	87
1896 ...	—	—	4	1	—	—	—	—	—	—	—	2	—	1	—	—	8
Total ...	1	25	56	2	2	19	—	—	6	—	13	12	69	34	5	35	279

THAKEHAM RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Amberley Parish ..	1,745	45	127	118	418	100
Pulborough Parish ..	1,615	86	58	153	258	170
Rest of Pulborough S.D.	1,500	51	82	145	251	171
Storrington Parish ..	1,454	83	41	163	288	132
Washington Parish ..	1,446	101	71	113	220	119
Rest of Washington S.D.	1,313	64	75	102	298	134
Mean	1,498	72	71	135	265	145
PERIOD.						
1876-80	1,563	43	132	148	273	134
1881-85	1,410	79	29	152	253	104
1886-90	1,389	87	63	128	276	140
1891-95	1,629	80	60	112	257	202
1896	1,227	63	37	62	162	100

(A)—Table of DEATHS during the Year 1896, in the THAKEHA.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (j)	Scarlatina. (k)	Diphtheria. (l)
Amberley Parish	12	1	2	—	—	5	4	Under 5 5 upwards.			
Pulborough Parish	14	1	3	—	—	4	6	Under 5 5 upwards.			
Rest of Pulborough S. D. ...	28	5	4	2	—	10	7	Under 5 5 upwards.			
Storrington Parish	12	2	1	—	—	3	6	Under 5 5 upwards.			
Washington Parish	7	1	1	—	—	2	3	Under 5 5 upwards.			
Rest of Washington S. D. ...	15	3	1	1	1	1	8	Under 5 5 upwards.			
Thakeham Workhouse	11	—	—	—	1	3	7	Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	99	13	12	3	2	28	41	Under 5 5 upwards.			
The subjoined numbers have also to be taken in											
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...	—	—	—	—	—	—	—	Under 5 5 upwards.			

RURAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Group.	FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Influenza.	Injuries.	All Other Diseases.	TOTAL.
	Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.													
1													1			1		3
													1	2		2	4	9
								1									2	4
														2		1	7	10
													2			2	5	9
										1		2	1			1	13	19
								1									2	3
													4		1		4	9
																	1	2
													1				4	5
																	4	4
												2		2			6	11
												1	3	2			5	11
								2					3			3	14	25
										1		5	10	8	1	4	43	74

amount in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES

Officer of Health, during the year 1896, in the THAKEHAM

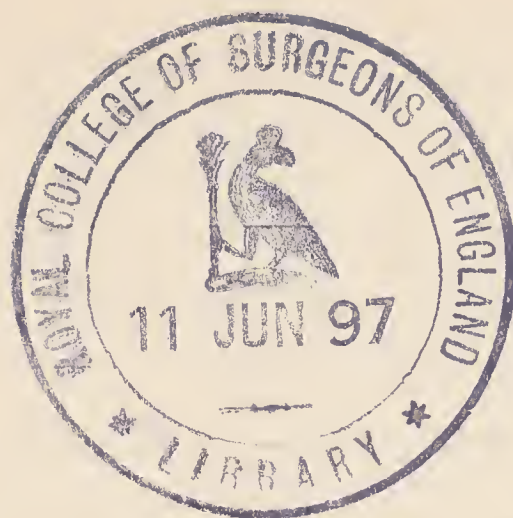
Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS COMING TO THE KNOWLEDGE OF THE					
	Census 1891.	Esti- mated mid- dle of 1895.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric Fever.
(a)	(b)	(c)	(d)	(e)						
Amberley Parish	525	520	14	Under 5 5 upwards.				1		
Pulborough Parish	1,787	1,800	39	Under 5 5 upwards.			3			
Rest of Pulborough Sub-District	1,434	1,410	41	Under 5 5 upwards.				4		
Storrington Parish	1,293	1,260	29	Under 5 5 upwards.		1				
Washington Parish	838	850	19	Under 5 5 upwards.				2		
Rest of Washington Sub-District	2,095	2,100	43	Under 5 5 upwards.			2	6		
Thakeham Workhouse	78	60	—	Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	8,049	8,000	185	Under 5 5 upwards.		1	5	1		

INFECTIOUS SICKNESS, coming to the knowledge of the Medical
District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

EAST PRESTON RURAL DISTRICT.

pp. 95 et seq.



EAST PRESTON RURAL DISTRICT.

The population in this registration district was 17,568 at the census of 1841 and 18,746 in 1851 ; owing chiefly to changes in the area, it declined to 17,423 in 1861 ; after which period it rose to 21,579 in 1871, to 26,364 in 1881, and to 32,394 in 1891. These figures, however, include the urban districts of Worthing and Littlehampton, which rapidly increased during this period, and Arundel with its almost stationary population.

The following figures show only the changes in the rural part of the district :—

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	—	30,520	30,696	30,637
Number of Inhabited Houses ..	1,355	1,467	1,662	1,805
„ Uninhabited „ ..	45	77	87	75
Population	6,716	7,675	8,025	8,692
Males	3,450	3,900	4,065	4,371
Females	3,266	3,775	3,960	4,321
Persons to a House	4.95	5.23	4.83	4.81

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish ; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable ; also from four diseases which, though formerly included in the zymotic group, are not notifiable ; from the frequent diseases, consumption, lung disease, and heart disease ; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.								Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.					
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
Broadwater ..	—	9	2	—	—	11	—	1	1	3	7	7	1	30	48	25	310
Heene ..	—	1	1	—	—	1	—	—	—	—	—	1	—	6	3	5	50
West Tarring ..	—	2	5	—	—	16	—	—	1	2	4	14	—	20	43	26	282
Clapham ..	—	1	—	—	—	1	—	—	—	—	1	3	—	5	10	3	71
Durrington ..	—	—	1	—	—	1	—	—	—	1	—	—	—	2	11	5	58
Goring ..	—	1	10	—	—	—	—	—	—	3	—	4	—	19	30	17	176
Ferring ..	—	1	1	—	—	2	—	—	—	—	—	—	—	5	10	9	68
Kingston ..	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	11
East Preston ..	—	—	1	—	—	—	—	—	1	1	5	—	—	9	10	8	79

Angmering	..	—	2	5	—	—	—	—	—	—	—	—	—	—	—	—	5	5	—	16	46	20	250
Lyminster	..	—	3	11	1	—	—	—	3	—	1	5	9	18	—	—	—	49	81	33	455		
Rustington	..	—	1	—	1	—	—	—	—	—	—	—	3	—	—	—	6	14	9	96			
Climping	..	—	—	3	—	—	—	—	—	—	—	1	2	—	—	—	7	8	11	76			
Ford	..	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2	5	2	21			
Tortington	..	—	—	1	—	—	—	2	—	1	—	1	—	—	—	—	1	6	8	57			
Lyminster (N.)	..	—	1	3	—	—	—	—	—	—	—	1	3	—	—	—	5	7	5	66			
Poling	..	—	—	—	—	—	—	—	—	2	—	—	1	1	—	—	8	11	5	78			
Angmering (N.)	..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	—	13			
Patching	..	—	1	1	—	—	—	—	—	—	—	1	—	—	—	—	4	11	11	79			
Warningcamp	..	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	3	4	24			
Burpham	..	—	—	—	—	—	—	1	—	—	—	—	1	1	1	1	7	7	6	78			
South Stoke	..	—	1	1	—	—	—	—	—	—	—	—	1	—	—	—	4	4	5	46			
Houghton	..	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	6	10	7	58			
Total	..	—	25	47	2	—	—	38	1	2	6	19	42	57	2	214	381	225	2,502				

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for the whole district and for each sub-district for a period of twenty years.

The mean general death-rate for the whole district is 14·8 per 1,000 in the twenty years, 1876-95; there was a steady fall in the mortality from 1876 to 1890, since which time there has been a rise.

All deaths occurring in East Preston Workhouse, which is situated within the district, have been distributed to each parish whence the inmate came. The deaths in that Institution belonging to any urban district have been transferred to the town to which the persons belonged.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high.

Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·85361; the *recorded* mean death-rate in Table 3 of 14·83, multiplied by this factor, becomes the *corrected* death-rate of 12·66 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 284 children were registered; of these 153 were male, and 131 were female.

Estimating the population in the middle of the year at 9,525, the birth-rate was equal to 29·8 per 1,000 persons living.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	241 ..	28·1	1892 ..	204 ..	23·3
1888 ..	226 ..	26·2	1893 ..	260 ..	29·5
1889 ..	230 ..	26·5	1894 ..	269 ..	30·0
1890 ..	204 ..	23·4	1895 ..	278 ..	30·2
1891 ..	244 ..	28·0	1896 ..	284 ..	29·8

The mean number of births is 244, and the mean birth-rate is 27·5 per 1,000 of population.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.					Birth-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Worthing Sub-District	113	111	117	115	..	33·8	32·6	32·9	30·3
Littlehampton S.D. . .	103	102	103	111	..	29·8	29·3	29·2	31·2
Arundel Sub-District	44	56	58	58	..	22·0	26·7	27·3	26·8
Total	260	269	278	284		29·5	30·0	30·2	29·8

In the Arundel Sub-district there is a thinly scattered agricultural population with an excess of people at advanced periods of life; hence the birth-rate is low.

GENERAL MORTALITY.

There were 172 deaths registered in this district during the year 1896, but from this number must be deducted the deaths of seventeen persons belonging to urban areas, outside this district. Of these seventeen persons, eleven came from Worthing, five from Littlehampton, and one from Arundel.

There were also twelve other deaths in the Workhouse, and these have been distributed among the several parishes whence each inmate came, viz., Clapham 1, Goring 1, Ferring 2, East Preston 2, Angmering 2, Lyminster 2, Rustington 1, Poling 1; in all 12.

There must be added the death of one person in Worthing Infirmary, who belonged to Broadwater. The total number of deaths belonging to this district amounts therefore to 156.

Estimating the population in the middle of the year at 9,525, the death-rate was equal to 16·4 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The variations in the death-rate during the past ten years are here shown :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	114 ..	13·3	1892 ..	143 ..	16·3
1888 ..	108 ..	12·5	1893 ..	145 ..	16·5
1889 ..	116 ..	13·4	1894 ..	124 ..	13·8
1890 ..	122 ..	14·0	1895 ..	164 ..	17·8
1891 ..	123 ..	14·1	1896 ..	156 ..	16·4

The mean number of deaths is 131, and the mean-death rate is 14·8 per 1,000. During the decade there were 2,440 births, so that the natural increase of births over deaths was 1,125.

The actual increase at the last census was 817, but as Heene with its 150 people was transferred to Worthing in 1890, the real increase was 667.

The following table shows the deaths and death-rate in each locality during the past four years:—

	Deaths.					Death-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Worthing Sub-District	63	54	66	60	..	18·9	15·9	18·6	15·8
Littlehampton S.D. ..	55	53	63	69	..	15·9	15·2	17·8	19·4
Arundel Sub-District	27	17	35	27	..	13·5	8·1	16·5	12·5
Total ..	145	124	164	156		16·5	13·8	17·8	16·4

In each parish the deaths in 1896 were thus distributed :—

Broadwater ..	26	..	Climping ..	4
West Tarring ..	18	..	Ford ..	3
Clapham ..	5	..	Tortington ..	5
Durrington ..	1	..	Lyminster (north)	4
Goring ..	6	..	Poling ..	3
Ferring ..	4	..	Angmering (north)	none
Kingston ..	none	..	Patching ..	2
East Preston ..	5	..	Warningcamp ..	6
Angmering (south) ..	17	..	Burpham ..	4
Lyminster (south) ..	30	..	South Stoke ..	1
Rustington ..	10	..	Houghton ..	2
Total ..	156.			

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

			Deaths under	Ratio to	
			Births.	one year.	1,000 Births.
Worthing Sub-District	..	..	115	7	61
Littlehampton Sub-District	..	..	111	18	162
Arundel Sub-District	..	..	58	2	34
			—	—	—
Total	..	..	284	27	95

The mean annual rate in the previous eight years, 1888-95, was 88 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

There were 13 deaths from zymotic disease in the case of those which are notifiable and there were 15 deaths in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 28 deaths with a zymotic mortality of 2·94 per 1,000.

				Cases.	Deaths.
	Small Pox	..	..	4	none
	Scarlatina	..	..	16	2
	Diphtheria	..	..	33	8
	Membranous Croup	..	..	1	1
Fevers.	Typhus	..	..	none	none
	Enteric	..	..	6	2
	Continued	..	..	none	none
	Relapsing	..	..	none	none
	Puerperal	..	..	none	none
	Cholera	..	..	none	none
	Erysipelas	..	..	6	none
	Total	..	..	66	13

The deaths in the other classes were as follows:—

	Deaths.
Measles	6
Whooping Cough	5
Diarrhœa and Dysentery	4
Rheumatic Fever	none
Total	15

The Infectious Disease (Notification) Act, 1891, came into operation in this district on March 1st, 1891, and on the same day the Infectious Disease (Prevention) Act, 1890, also took effect.

On March 21st, 1891, the Public Health Acts Amendment Act, 1890, Part III, came into operation.

The prevalence in each quarter of each infectious disease is here shown:—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	—	4	—	—	4
Scarlatina	2	3	5	6	16
Diphtheria	6	10	13	4	33
Membranous Croup	1	—	—	—	1
Enteric Fever	2	—	3	1	6
Erysipelas	—	2	3	1	6
Total	11	19	24	12	66

There were 6 cases notified in 1891; 54 in 1892; 156 in 1893; 40 in 1894; and 61 in 1895.

SMALL POX.—There were four cases of small pox at the end of April, which were at once isolated by removal to Swandean; all these patients caught the disease from a woman who died in Worthing about a fortnight previously. Each patient recovered, and there was no further spread of the disorder. The history of these cases is given in the Worthing report of the outbreak, with which it was intimately connected.

DIPHTHERIA was very prevalent in Broadwater and West Tarring all through the year, and this outbreak was chiefly due to an epidemic in Worthing at the same time. The history of this outbreak will, therefore, be given in the Worthing report.

WATER SUPPLY.

There was no change in the water supply during the year, but by the end of 1896, the new waterworks for Worthing, West Worthing, Broadwater, and West Worthing were completed, and this new source will be available early in 1897. A new water supply for Wick, which is urgently needed, will probably be completed in the year 1897.

DRAINAGE AND SEWERAGE.

Much discussion took place during the year on the drainage of Broadwater and Wick, but no definite scheme has yet been adopted in either place.

Broadwater is now losing its rural character, and several new houses of a semi-urban type have been erected. This will necessitate a main system of sewerage, as these new houses are built close together, and there is not enough land around them to admit of an earth-system being carried out.

Some have been erected on low lying ground, and, in order to drain this damp area, a general system of drainage will have to be adopted. It is proposed to connect this new system with the Worthing main sewer, but there are many difficulties to be overcome. Perhaps the best method would be to extend the Borough of Worthing, so as to include parts of the parishes of Broadwater and West Tarring, and to have the whole system of sewerage under one management.

There are also many difficulties to be encountered in dealing with the drainage of Wick, which is situated just outside, and to the north of Littlehampton Urban District. Wick lies too low to be drained into the Littlehampton system without pumping the sewage, and the Council of that town have no desire to extend their boundaries so as to include Wick, nor do the inhabitants of Wick seem anxious to be

joined to Littlehampton. In the meantime, while much delay may take place before the drainage will be carried out, I would again urge the necessity of proceeding with a supply of wholesome water, which can be effected without much trouble or expense.

The drainage difficulty might be dealt with, at least for a time, by adopting the Bexley system of emptying cesspits, a plan which has met with much success in Portslade, and of which a description is given on pp. 29, 30, of this Report.

SYSTEMATIC INSPECTION.

The following is a list of routine work during the year 1896, as recorded in the books of the Sanitary Inspector, Mr. Vail:—

No. of Houses visited	..	..	..	..	415
Nuisances reported	..	..	..	..	123
Nuisances abated without notice	..	..	..	..	107
Nuisances abated with notice	..	..	..	..	16
Houses cleansed and limewashed	..	..	..	..	37
Houses disinfected	..	..	..	..	31
Water certificates granted	..	..	..	..	44
Wells cleaned	..	..	..	..	none
New wells	..	..	..	..	4
Wells closed	..	..	..	..	1
Samples of water analysed	..	..	..	..	6
Samples of water polluted	..	..	..	..	2
Cases of overcrowding abated	..	..	..	..	none
Privies altered	..	..	..	..	3
Drains re-laid	..	..	..	..	12

SCAVENGING AND CLEANSING.

The scavenging of house refuse at Broadwater and West Tarring, and the emptying of privies and cesspools at Broadwater and in that part of West Tarring which is outside of the sewage area, has been carried out satisfactorily by the contractors in each parish.

BAKEHOUSES.

The fifteen bakehouses have been frequently inspected, and they have been well kept.

SLAUGHTER HOUSES.

These are six in number, and they have been kept in good order but they require frequent inspection to see that no nuisance arises.

COWSHEDS AND DAIRIES

The twenty-six cowsheds have been regularly inspected and kept clean ; no disease of any animals was recorded during the year.

LODGING HOUSES

There is no Common Lodging House in the district.

PROCEEDINGS BEFORE THE MAGISTRATES.

No legal proceedings were taken during the year.

INQUESTS.

Inquests were held in fourteen cases:—Male, 59 years, heart disease ; female, 2 years, meningitis ; male, 64 years, suicide by cutting throat with a razor ; male, 2 years, accidentally run over by a trolley ; female, 52 years, accidentally killed by a locomotive on the railway ; male, 2 years, accidentally burnt ; male, 65 years, heart disease ; female, 66 years, heart disease ; male, 70 years, heart disease ; male, 5 years, peritonitis ; female, 41 years, found drowned in the River Arun ; male, 51 years, brain disease ; male, 65 years, heart disease ; female, 60 years, accidentally burnt.

There were five deaths returned as “ not certified ” during the year:—Male, 6 days, convulsions ; female, 61 years, heart disease ; female, 91 years, senile decay ; male, 45 years, heart disease ; male, 9 hours, premature birth.

EAST PRESTON RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95, and in 1896.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85	...	603	100	53	35	28	185	202
1886-90	...	566	82	50	30	34	149	221
1891-95	...	699	118	69	47	39	191	235
Per 1,000	...	1,000	161	92	60	54	281	352
1896	...	156	27	18	16	8	32	55

EAST PRESTON RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the twenty years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	—	11	8	—	—	9	1	—	—	—	2	4	8	19	—	—	62
1881-85 ...	—	8	17	—	—	1	—	—	1	—	2	9	8	7	2	—	55
1886-90 ..	—	5	13	—	—	1	—	—	1	—	—	1	17	16	—	—	54
1891-95 ...	—	1	9	2	—	27	—	—	—	—	2	5	9	15	—	20	90
1896 ...	—	2	8	1	—	2	—	—	—	—	—	6	5	4	—	3	31
Total ...	—	27	55	3	—	40	1	—	2	—	6	25	47	61	2	23	292

EAST PRESTON RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Worthing Sub-District	1,571	108	79	135	240	140
Littlehampton Sub-Dist.	1,488	53	81	138	250	123
Arundel Sub-District ..	1,280	41	38	92	154	131
Mean	1,483	72	71	128	223	134
PERIOD.						
1876-80	1,645	80	80	176	209	148
1881-85	1,452	70	63	130	201	149
1886-90	1,286	46	79	100	209	128
1891-95	1,550	91	64	106	275	111
1896	1,638	136	158	168	210	210

(A)—Table of DEATHS during the Year 1896, in the EAST PRESTON

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (i)	Scarlatina. (j)
Worthing Sub-District ...	56	7	13	9	3	11	12	Under 5 5 upwards.		
Littlehampton Sub-District ...	62	18	5	5	2	13	19	Under 5 5 upwards.		1
Arundel Sub-District...	26	2	—	2	1	5	16	Under 5 5 upwards.		1
East Preston Workhouse ...	29	—	—	—	2	6	21	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS.....	172	27	18	16	8	35	68	Under 5 5 upwards.		1 1
The subjoined numbers have also to be taken in										
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	1	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto...	17	—	—	—	—	4	13	Under 5 5 upwards.		

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF SICKNESS
 Officer of Health, during the year 1896, in the EAST PRESTON SANITARY DISTRICT.

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK COMING TO THE KNOWLEDGE OF					
	Census 1891.	Esti- mated to mid- dle of 1895.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.	
(a)	(b)	(c)	(d)	(e)					Typhus.	Enteric.
Worthing Sub-District ...	3,261	3,800	115	Under 5 5 upwards.			6 26	1		
Littlehampton Sub-District ...	3,285	3,390	111	Under 5 5 upwards.		1 2	1 1			5
Arundel Sub-District ...	1,984	2,165	58	Under 5 5 upwards.						1
East Preston Workhouse ...	162	170	—	Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	8,692	9,525	284	Under 5 5 upwards.		1 4	7 27	1		6

INFECTIOUS SICKNESS, coming to the knowledge of the Medical
 District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

MIDHURST RURAL DISTRICT.

pp. 113 et seq.

MIDHURST RURAL DISTRICT.

The population in this registration district was 13,325 at the census of 1841, and 13,599 in 1851; there was then a decline owing to alterations in the area, and from 1861 onwards there has been a steady increase, as is shown in the following statement.

The figures here given relate to the present rural sanitary area which is co-extensive with the registration district :—

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	—	65,695	66,571	66,744
Number of Inhabited Houses ..	2,473	2,621	2,801	2,919
„ Uninhabited „ ..	88	79	136	188
Population	12,608	13,042	13,965	14,236
Males	6,545	6,767	7,185	7,216
Females	6,063	6,275	6,780	7,020
Persons to a House	5·10	4·97	4·98	4·84

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable; also from four diseases which, though formerly included in the zymotic group, are not notifiable; from the frequent diseases, consumption, lung disease, and heart disease; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the twenty years, 1876-95.

PARISH.	Notifiable.								Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	
	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.				Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.					
					Typhus.	Enteric.	Continued.	Puerperal.									Erysipelas.
East Lavington..	—	—	1	—	—	4	—	—	1	—	2	—	—	4	4	5	48
West Lavington..	—	—	—	—	—	1	—	—	—	—	—	2	—	5	10	6	51
Tillington ..	2	4	3	—	—	1	1	—	2	—	3	1	2	36	34	28	291
Lodsworth ..	—	—	1	—	—	3	—	—	1	—	3	1	—	32	22	23	220
Selham ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	13
Heyshott ..	—	—	9	—	—	4	—	1	1	—	—	1	1	5	22	8	132
Graffham ..	2	—	—	—	—	—	—	—	1	—	4	—	1	14	9	14	120
Cocking ..	—	—	—	—	—	2	—	1	1	—	2	—	2	16	22	18	140
Midhurst ..	—	1	8	—	—	8	—	—	2	—	13	3	3	62	76	56	561
Woolbeding ..	—	—	3	—	—	1	—	1	—	—	3	1	—	5	16	14	96
Easebourne ..	—	2	8	1	—	5	—	—	2	—	5	3	1	32	38	31	339

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for two large parishes and for each sub-district for a period of twenty years.

The mean general death-rate for the whole district is 14·9 per 1,000 in the twenty years, 1876-95; there has been very little variation in the general mortality; consumption has apparently decreased, and lung diseases have increased.

All deaths occurring in Easebourne Workhouse, have been distributed to each parish whence each inmate came.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high.

Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·91476; the *recorded* mean death-rate in Table 3 of 14·94, multiplied by this factor, becomes the *corrected* death-rate of 13·67 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 336 children were registered; of these 161 were male, and 175 were female.

Estimating the population in the middle of the year at 14,370 the birth-rate was equal to 23·4 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	345 ..	24·3	1892 ..	356 ..	24·9
1888 ..	399 ..	28·0	1893 ..	393 ..	27·5
1889 ..	366 ..	25·7	1894 ..	371 ..	25·9
1890 ..	348 ..	24·4	1895 ..	345 ..	24·0
1891 ..	353 ..	24·7	1896 ..	336 ..	23·4

The mean number of births is 361, and the mean birth-rate is 25·3 per 1,000 of population.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.					Birth-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Midhurst Parish ..	47	40	42	35	..	28·0	23·7	24·7	20·6
Easebourne Parish ..	32	37	33	42	..	22·0	25·2	22·1	28·2
Rest of Midhurst S.D.	112	98	89	101	..	29·9	26·1	23·7	26·7
Fernhurst Sub-District	73	68	65	62	..	29·0	27·0	25·8	24·6
Harting Sub-District	129	128	116	96	..	26·4	26·2	23·8	19·7
Total ..	393	371	345	336		27·5	25·9	24·0	23·4

GENERAL MORTALITY.

There were 173 deaths registered in this district during the year 1896, and of these, eleven took place in Easebourne Workhouse. These eleven deaths have been distributed amongst the several parishes whence each inmate came, viz., Tillington 2, Cocking 1, Midhurst 2, Easebourne 1, Stedham 1, Iping 1, Rogate 1, Harting 1, Bepton 1 ; in all 11.

Estimating the population in the middle of the year at 14,370, the death-rate was equal to 12·0 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The variations in the death-rate during the past ten years are here shown :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	219 ..	15·4	1892 ..	247 ..	17·3
1888 ..	191 ..	13·4	1893 ..	183 ..	12·8
1889 ..	157 ..	11·0	1894 ..	197 ..	13·7
1890 ..	191 ..	13·4	1895 ..	198 ..	13·8
1891 ..	267 ..	18·7	1896 ..	173 ..	12·0

The mean number of deaths is 202, and the mean death-rate is 14·1 per 1,000 of population.

There have been during this decade 3,612 births, so that the natural increase of population by excess of births over deaths was 1,589. The actual increase as shown by the Census returns was 271, so that a large number of persons must have left the district.

The following table shows the deaths and death-rate in each locality during the past four years :—

	Deaths.					Death-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Midhurst Parish ..	22	30	26	19	..	13·1	17·7	15·3	11·2
Easebourne Parish ..	10	20	14	17	..	6·9	13·0	9·4	11·4
Rest of Midhurst S.D.	60	44	45	53	..	16·0	11·7	12·0	14·0
Fernhurst Sub-District	26	38	37	31	..	10·3	15·1	14·7	12·3
Harting Sub-District ..	65	65	76	53	..	13·3	13·3	15·6	10·9
Total ..	183	197	198	173		12·8	13·7	13·8	12·0

In each parish the deaths in 1896 were thus distributed :—

East Lavington ..	3	..	Fernhurst ..	16
West Lavington ..	6	..	Linchmere ..	none.
Tillington ..	14	..	Linch ..	1
Lodsworth ..	5	..	Stedham ..	5
Selham ..	none.	..	Iping ..	5
Heyshott ..	4	..	Trotton ..	2
Graffham ..	10	..	Chithurst ..	6
Cocking ..	8	..	Terwick ..	2
Midhurst ..	19	..	Rogate ..	13
Woolbeding ..	2	..	Harting ..	16
Easebourne ..	17	..	Elsted ..	1
South Ambersham ..	1	..	Treyford ..	none.
North Ambersham ..	1	..	Didling ..	none.
Lurgashall ..	13	..	Bepton ..	3
Total		..	173.	

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

	Births.	Deaths under one year.	Ratio to 1,000 Births
Midhurst Parish	35	none	—
Easebourne Parish	42	5	119
Rest of Midhurst Sub-District ..	101	9	89
Fernhurst Sub-District	62	6	97
Harting Sub-District	96	12	125
Total	336	32	95

The mean annual infantile death-rate in the previous eight years, 1888-95, was 88 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic disease were 3 in the case of those which are notifiable, and 11 in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 14 deaths with a zymotic mortality of 0.97 per 1,000.

				Cases.	Deaths.
	Small Pox	..	..	..	none
	Scarlatina	..	..	..	17
	Diphtheria	..	..	..	10
	Membranous Croup		..	..	none
Fever.	Typhus	..	..	..	none
	Enteric	..	..	..	11
	Continued	..	..	..	none
	Relapsing	..	..	..	none
	Puerperal	..	..	..	none
	Cholera	..	..	..	none
	Erysipelas	..	..	..	13
	Total	..	..	51	3

In the other classes the deaths were as follows:—

				Deaths.
	Measles	..	..	..
	Whooping Cough	..	..	10
	Diarrhoea and Dysentery	..	..	none
	Rheumatic Fever	..	..	1
	Total	..	11	

The prevalence in each quarter of each infectious disease is here shown in the following table:—

			1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
	Scarlatina	..	4	4	1	8	17
	Diphtheria	..	5	3	2	—	10
	Enteric Fever	..	—	2	6	3	11
	Puerperal Fever	..	—	—	—	—	—
	Erysipelas	..	1	5	3	4	13
	Total	..	10	14	12	15	51

The Infectious Disease (Notification) Act, 1889, came into operation in this district on January 1st, 1890. There were 55 cases notified in 1890, 83 in 1891, 100 in 1892, 85 in 1893, 39 in 1894, and 42 in 1895.

WATER SUPPLY.

The description of the proposed water supply for Midhurst is given on pages 97-99 of my annual Report for 1894, where an account is also given of the geological strata which were bored through, and of the chemical examination of the water obtained from the boring.

This water supply has not yet been laid on to the town, although one of the chief needs of Midhurst is the provision of an abundant supply of good and wholesome water.

DRAINAGE AND SEWERAGE.

The scheme for the sewerage of Midhurst and of two adjacent areas has made much progress during the year.

A Local Government Board inquiry was held by Mr. F. H. Tulloch, M.Inst. C.E., on February 7th, 1896, in consequence of the Rural District Council having presented a petition to the Local Government Board to issue a provisional order to empower the said Council to put in force, with reference to certain lands required by them for the disposal of the sewage of the parishes of Midhurst, Easebourne, and West Lavington, the powers of the Lands Clauses Acts with respect to the purchase and taking of lands otherwise than by agreement. The said lands are referred to in advertisements in the "Midhurst Times" newspaper, dated the 9th, 16th, and 23rd of November, 1895, respectively.

Mr. Santo Crimp, in explaining the scheme, said it was not easy to find a site. They had to provide a site and get land for the treatment of the sewage, not objectionable to the landowners or the Earl of Egmont. It was intended to pump the whole of the matter to that site, the suspensory matter would be made thoroughly innocuous by means of filtration, and it would afterwards be applied to the fifteen acres they proposed to acquire in the ordinary manner. It would be impossible to create any bad smells or nuisance. The extremely light nature of the soil made it well adapted for the purpose, it was the best site that could be obtained, and was as far as possible from habitations. A gamekeeper's cottage was near, and Little Todham Farm was about 300 yards away from the proposed tanks. They did not intend to under drain the site, and the only buildings would be the filtering tanks. The area for the pumping station was about one-tenth of an acre, and there would only be a small building about 20ft. by 30ft., and no chimney would be built, as gas or oil would be used. The distance from the pumping station to the sewage farm was a mile and a half. It was not possible to deal with the drainage of Midhurst without a sewage farm.

A formal objection was lodged on behalf of the Earl of Egmont, although he did not object to grant land to the Rural District Council. His objection to the proposed site was the future prospect of the land and the surrounding area, which was too good for a sewage farm to be near it. It was his opinion that it would drain down towards the public road. The keeper's cottage was close to the proposed site, and the drinking water for this cottage was obtained from the springs rising on this land. The effluent could only be drained into a small stream which was about a quarter of a mile from the river, and the convenience of the tenant in reaching other land would be very much impeded. The tenant used the land as a means of access to other parts. It was also an objection to the scheme that if additional land was required in future it could only be obtained from land surrounded by the public roads. As regarded the pumping stations, the land selected was the worst that could be secured. It was a small plot of land with paths on three sides and a cart road on the west, and was close to the Close Walks. If the station was put up there it would hinder the removal of timber, if

wanted, and the road to the proposed station was at times flooded with water. There was a larger space in the wharf, which was more convenient, and yet had not been taken. The cottage near the proposed site had just been done up, and was worth £8 per year.

A Local Government Board inquiry was also held by Mr. F. H. Tulloch, at Midhurst Town Hall, on December 2nd, 1896, for approval of a special drainage district consisting of the Parish of Midhurst and parts of the Parishes of Easebourne and West Lavington, and the District Council also applied for sanction to borrow £15,000 for works of Sewerage and Water Supply for such district.

The Chairman said the scheme was the fourth brought forward during the last sixteen years. The last one was brought forward by the Sanitary Authority which was then in existence, but it was not carried out. The District Council came into office, and shortly after received a letter from the Local Government Board requesting them to provide suitable drainage for Midhurst, parts of Easebourne and West Lavington, and advising them to consult a first-class engineer on the subject. They consulted Messrs. Taylor and Sons and Santo Crimp. Respecting Midhurst, there was no doubt it wanted drainage and a water supply. In speaking of the parts of Easebourne included in the proposed scheme, he said at the north side of Midhurst there was Dodsley, drained by sewers which flowed into a filtering tank, and through this tank into the river Rother without being properly filtered. The other part of Easebourne included in the scheme was called Easebourne Street, and was drained by a system of cesspools. Running down by the side of the road was a stream or ditch, called the lake, and eventually it discharged into the river. Although this stream was not polluted by sewage, it was by house water, such as soap suds, &c. At the south of Midhurst was West Lavington, the boundary running through South Pond, part of which was in each parish. There were a certain number of houses—14 he thought—which drained into cesspools and at times overflowed into South Pond, and the District Council thought it most advantageous that they should be included in the drainage scheme. A supply of water and drainage was most vital for the prosperity of Midhurst. They were aware of the great increase it would make in the rates, which was a very serious matter indeed. Midhurst was not a large or prosperous place, and he urged the Inspector to recommend the Local Government Board to grant the fullest time possible for the repayment of the loan, which, he believed, was 60 years.

Mr. Santo Crimp explained the proposed scheme at some length. The sewers were to be laid down in the proper way. There would be manholes or inspection shafts, and every part could be easily inspected. There would be flushing tanks, all with self-cleansers. In regard to the present system at Easebourne, they had already spent some money in putting down a sewer, which would save them half the cost, as they would have had to put in some pipes to take the surface water. Therefore the money was not wasted. The same with Midhurst; the present pipes would be used for the waste water. He denied that Easebourne could be drained without pumping. Respecting the pumping station, it was better to have only one than three, as only one man would then be required to work it. They could get a water supply of 30,000 or 40,000 gallons per day. The pump would be capable of pumping 80,000 gallons

in six hours. The land for the sewage farm, which was 15 acres in extent, was just below South Ambersham, and it was capable of purifying sewage for an indefinite time. Under any circumstances the proper way would be to connect Easebourne with Midhurst.

The following figures relate to the proposed special drainage district :—

	Ratable value.	Reduced value.	Total value.	Area in Acres.	Popula- tion.	Houses.
Midhurst Parish ..	7,152	800	7,952	672	1,674	334
Part of Easebourne ..	2,384	188	2,572	181	850	173
Part of West Lavington	457	68	525	66	70	14
Special Drainage Area	9,993	1,056	11,049	919	2,594	521

This scheme had not at the end of the year received the sanction of the Local Government Board.

SYSTEMATIC INSPECTION.

The following is a summary of routine work during the year 1896, as recorded in the books of the Sanitary Inspector, Mr. A. G. Gibbs :—

No. of Premises inspected ..	..	..	..	..	236
Visits of inspection ..	..	..	..	..	543
Nuisances ..	..	..	..	..	166
Nuisances abated with letter ..	..	..	..	..	143
Nuisances abated with notice ..	..	..	..	..	19
Houses unfit for habitation ..	..	..	..	..	7
Houses unfit for habitation, closed ..	..	..	..	..	0
Houses unfit for habitation, repaired ..	..	..	..	..	6
Houses repaired by Order of Council ..	..	..	..	..	14
Houses disinfected ..	..	..	..	..	17
Houses whitewashed ..	..	..	..	..	23
Cases of overcrowding ..	..	..	..	..	3
Cases of overcrowding abated ..	..	..	..	..	3
Samples of water analysed ..	..	..	..	..	11
Samples of water polluted ..	..	..	..	..	3
Water certificates granted ..	..	..	..	..	16

LEGAL PROCEEDINGS.

No legal proceedings were taken during the year.

BAKEHOUSES.

The bakehouses are limewashed twice a year. They are very well kept, and in no case is there any drain within the building.

SLAUGHTER HOUSES.

The ten slaughter houses are very fairly kept, and any refuse or offal is removed as soon as possible ; the walls are regularly limewashed. Two licenses for the erection of slaughter houses were refused as being too near dwellings.

ARTICLES OF FOOD.

No Article of Food was condemned during the year.

INQUESTS.

Inquests were held in seven cases :—Female, 20 days, bronchitis ; female, 2 years, accidentally drowned by falling into a pool ; male, five weeks, debility from birth ; male 26 years, liver disease ; female, 2 years, accidentally drowned in a pool of water ; male, 74 years, apoplexy ; male, 53 years, heart disease.

There were two deaths returned as “not certified” during the year :—Male, 12 months, bronchitis ; female, 83 years, probably apoplexy.

MIDHURST RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95, and in 1896.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85	...	1,096	184	111	64	65	306	366
1886-90	...	1,001	150	88	43	45	285	390
1891-95	...	1,092	179	93	54	60	298	408
Per 1,000	...	1,000	161	92	50	53	279	365
1896	...	156	27	18	16	8	32	55

TABLE 2.—Showing the Deaths from various causes in the twenty years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	4	3	14	—	1	10	2	—	1	—	3	7	17	12	5	—	79
1881-85 ...	6	22	27	—	—	10	—	—	1	—	10	7	13	10	4	—	110
1886-90 ...	—	2	12	—	—	12	—	—	2	—	1	11	23	5	4	5	77
1891-95 ...	—	1	28	2	—	9	—	—	—	—	4	12	19	3	3	60	141
1896 ...	—	—	1	—	—	2	—	—	—	—	—	—	10	—	1	4	18
Total ...	10	28	82	2	1	43	2	—	4	—	18	37	82	30	17	69	425

MIDHURST RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the twenty years, 1876-95, and the Death-rate in 1896.

LOCALITY.	All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Midhurst Parish ..	1,700	57	63	188	230	170
Easebourne Parish ..	1,390	74	41	131	156	127
Rest of Midhurst S.D.	1,496	69	49	156	194	161
Fernhurst Sub-District	1,423	78	68	137	213	165
Harting Sub-District ..	1,521	59	53	110	215	152
Mean	1,494	66	55	138	203	155
PERIOD.						
1876-80.. ..	1,552	55	60	174	170	182
1881-85.. ..	1,540	107	48	143	211	147
1886-90.. ..	1,356	40	60	128	207	150
1891-95.. ..	1,529	61	52	105	225	141
1896	1,204	21	76	62	153	167

(A)—Table of DEATHS during the Year 1896, in the MIDHURST

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox. (j)	Scarlatina. (k)
Midhurst Parish	17	—	1	1	1	4	10	Under 5 5 upwards.		
Easebourne Parish	16	5	1	—	—	3	7	Under 5 5 upwards.		
Rest of Midhurst Sub-District	50	9	6	1	—	13	21	Under 5 5 upwards.		
Fernhurst Sub-District ...	31	6	1	1	1	6	16	Under 5 5 upwards.		
Harting Sub-District	48	12	2	—	1	13	20	Under 5 5 upwards.		
Easebourne Workhouse ...	11	—	—	—	—	1	10	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS.....	173	32	11	3	3	40	84	Under 5 5 upwards.		
The subjoined numbers have also to be taken in										
Deaths occurring outside the District among persons belonging thereto.....								Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto...								Under 5 5 upwards.		

URAL DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Croup.	FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Influenza.	Injuries.	All Other Diseases.	TOTAL.
	Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.													
								1									—	1
		1										3	3	1	1		7	16
													3				3	6
												1		3			6	10
								3					1			1	9	15
													3	4	2		26	35
																1	6	7
											1	3	2	7			11	24
								6					5				3	14
		1										2	3	8	1		19	34
																	—	—
													2	1			8	11
								10					9			2	21	43
		2									1	9	13	24	4		77	130

amount in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES

Officer of Health, during the year 1896, in the MIDHURST

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SMALLPOX COMING TO THE KNOWLEDGE OF THE OFFICER OF HEALTH.					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	FEBRILE AFFECTIONS.
(a)	(b)	(c)	(d)	(e)						
Midhurst Parish	1,674	1,700	35	Under 5 5 upwards.						
Easebourne Parish	1,296	1,400	41	Under 5 5 upwards.						
Rest of Midhurst Sub-District	3,769	3,780	101	Under 5 5 upwards.		1 6	1 6			
Fernhurst Sub-District ...	2,514	2,520	62	Under 5 5 upwards.						
Harting Sub-District	4,887	4,880	96	Under 5 5 upwards.		4				
Easebourne Workhouse .	96	90	1	Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	14,236	14,370	336	Under 5 5 upwards.		1 16	1 9			11

INFECTIOUS SICKNESS, coming to the knowledge of the Medical
District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

WESTBOURNE RURAL DISTRICT.

pp. 131 et seq.

WESTBOURNE RURAL DISTRICT.

The population in this registration district was 6,669 at the census of 1841, and 6,944 in 1851; it then rose steadily up to 1881, since which period it has declined; this decrease is not to be accounted for by any change in area.

The following figures relate to the present rural sanitary area which is co-extensive with the registration district :—

	1861.	1871.	1881.	1891..
Area in Statute Acres ..	—	32,886	32,040	32,040
Number of Inhabited Houses ..	1,427	1,495	1,533	1,516
„ Uninhabited „ ..	43	56	66	112
Population	6,957	7,221	7,420	7,084
Males	3,502	3,611	3,742	3,552
Females	3,455	3,610	3,552	3,532
Persons to a House	4.88	4.83	4.84	4.67

In my last Annual Report a table was given showing the population as numbered at each census in 1861-91, also the number of inhabited houses in each parish; a table was also given showing the deaths in each parish from various causes during the previous twenty years arranged in four five-year periods. These tables are not repeated, but the accompanying table shows the deaths in each parish for the twenty years, 1876-95, from each of those diseases which are notifiable; also from four diseases which, though formerly included in the zymotic group, are not notifiable; from the frequent diseases, consumption, lung disease, and heart disease; and, lastly, from all causes. By comparing the tables in the last Report with the present one, the death-rate for each parish can be easily obtained, and also the prevalence of each group of disorders in each five-year period.

Table showing the Deaths from various causes in each Parish in the fifteen years, 1881-95.

PARISH.	Notifiable.										Non-notifiable.				Phthisis.	Lung Disease.	Heart Disease.	All Diseases.
	Small Pox.	Scarlatina.	Diphtheria.	Membranous (roup.	Fevers.				Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.					
					Typhus.	Enteric.	Continued.	Puerperal.										
West Dean ..	—	—	—	—	—	1	—	—	—	2	—	7	2	3	7	9	133	
East Marden ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	17	
North Marden ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	11	
Up Marden ..	—	—	2	—	—	1	—	—	—	—	—	1	2	—	5	4	59	
Stoughton ..	—	—	6	—	—	1	—	—	—	—	—	1	—	1	15	11	130	
Compton ..	—	—	4	—	—	—	—	—	—	1	—	1	—	—	3	5	65	
Racton ..	—	—	—	—	—	1	—	—	—	—	—	1	1	—	1	—	16	
Funtington ..	—	—	11	—	—	5	—	—	—	2	—	2	4	—	18	20	240	
Bosham ..	—	—	7	2	—	3	—	—	—	2	2	9	5	1	20	23	311	
Chidham ..	—	1	1	—	—	1	—	—	—	—	—	3	—	—	9	2	55	
West Thorney ..	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	16	
Westbourne ..	—	—	17	—	—	9	—	—	2	1	—	9	6	—	58	42	602	
Total ..	—	1	48	2	—	22	—	2	8	15	35	21	5	137	323	119	1655	

Cholera and relapsing fever, though included in the list of notifiable diseases, are here omitted, as there were no cases recorded during the period.

In Table 3 the death-rates for various groups of diseases are given for two large parishes and for each sub-district for a period of twenty years.

The mean general death-rate for the whole district is 14·9 per 1,000 in the twenty years, 1876-95; there has been very little variation in the general mortality; consumption has apparently decreased, and lung diseases have increased.

All deaths occurring in Easebourne Workhouse, have been distributed to each parish whence each inmate came.

The above death-rates are those recorded in each parish and they are strictly comparable one with another. In comparing this district with other districts it should be remembered that the age and sex distribution of the population, which is mostly of a rural type, makes the mortality appear a little too high.

Taking the factor of correction throughout England and Wales as unity (1·00000), the factor for correction for this district is ·85571; the *recorded* mean death-rate in Table 3 of 15·01, multiplied by this factor, becomes the *corrected* death-rate of 12·84 per 1,000.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 179 children were registered; of these 83 were male, and 96 were female.

Estimating the population in the middle of the year at 6,950 the birth-rate was equal to 25·7 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

The births and birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	225 ..	31·1	1892 ..	203 ..	28·8
1888 ..	204 ..	28·4	1893 ..	183 ..	26·0
1889 ..	203 ..	28·4	1894 ..	199 ..	28·3
1890 ..	207 ..	29·1	1895 ..	165 ..	23·6
1891 ..	194 ..	27·4	1896 ..	179 ..	25·7

The mean number of births is 196, and the mean birth-rate is 27·6 per 1,000 of population.

The following table shows the births and birth-rate in each locality during the past four years :—

	Births.					Birth-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Funtington Parish ..	23	22	24	17	..	23·0	22·0	24·0	17·0
Bosham Parish ..	29	43	41	31	..	23·0	33·8	32·3	24·4
Westbourne Parish ..	70	66	54	59	..	29·2	27·5	21·4	25·1
Rest of Westbourne D.	61	68	46	72	..	25·7	28·8	19·6	30·9
Total ..	183	199	165	179		26·0	28·3	23·6	25·7

GENERAL MORTALITY.

There were 97 deaths registered in this district during the year 1896, and of these, eleven took place in Westbourne Workhouse. These eleven deaths have been distributed amongst the several parishes whence each inmate came, viz., West Dean 2, Stoughton 1, Compton 1, Funtington 3, Westbourne 4; in all 11.

Estimating the population in the middle of the year at 6,950, the death-rate was equal to 13·9 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The variations in the death-rate during the past ten years are here shown :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	108	14·9	1892 ..	116	16·4
1888 ..	96	13·4	1893 ..	126	17·9
1889 ..	89	12·4	1894 ..	106	15·1
1890 ..	97	13·6	1895 ..	110	15·7
1891 ..	124	17·5	1896 ..	97	13·9

The mean number of deaths is 107, and the mean death-rate is 15·1 per 1,000 of population.

There have been during this decade 1,962 births, so that the natural increase of population by excess of births over deaths was 893.

The following table shows the deaths and death-rate in each locality during the past four years :—

	Deaths.					Death-rate.			
	1893.	1894.	1895.	1896.		1893.	1894.	1895.	1896.
Funtington Parish ..	21	13	17	13	..	21·0	13·0	17·0	13·0
Bosham Parish ..	21	21	22	12	..	16·7	16·5	17·3	9·4
Westbourne Parish ..	44	36	46	35	..	18·3	15·0	19·3	14·9
Rest of Westbourne D.	40	36	25	37	..	16·9	15·2	10·6	15·9
Total ..	126	106	110	97		17·9	15·1	15·7	13·9

In each parish the deaths in 1896 were thus distributed :—

West Dean ..	10	..	Racton ..	..	none.
East Marden ..	2	..	Funtington ..	..	13
North Marden ..	none	..	Bosham ..	..	12
Up Marden ..	2	..	Childham ..	..	1
Stoughton ..	8	..	West Thorney ..	..	4
Compton ..	10	..	Westbourne ..	..	35
Total		..	97.		

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

	Births.	Deaths under one year.	Ratio to 1,000 Births
Funtington Parish	17	—	—
Bosham Parish	31	2	64
Westbourne Parish	59	2	34
Rest of Westbourne District ..	72	6	83
Total	179	10	56

The mean annual infantile death-rate in the previous eight years, 1888-95, was 96 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 2 in the case of those which are notifiable, and none in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 2 deaths with a zymotic mortality of 0·29 per 1,000.

	Cases.	Deaths.
Small Pox	5	none
Scarlatina	11	none
Diphtheria	11	2
Membranous Croup	none	none
Fevers. { Typhus	none	none
	18	none
	none	none
	none	none
	1	none
Puerperal	none	none
Cholera	5	none
Erysipelas	5	none
Total	51	2

In the other classes the deaths were as follows:—

	Deaths.
Measles	none
Whooping Cough	none
Diarrhœa and Dysentery	none
Rheumatic Fever	none
Total ..	none

The prevalence in each quarter of each infectious disease is here shown in the following table:—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	1	4	—	—	5
Scarlatina	8	—	2	1	11
Diphtheria	2	2	—	7	11
Enteric Fever	2	3	13	—	18
Continued Fever	—	—	—	—	—
Puerperal Fever	—	1	—	—	1
Erysipelas	3	2	—	—	5
Total ..	16	12	15	8	51

The Infectious Disease (Notification) Act, 1889, came into operation in this district on December 31st, 1891. There were 30 cases notified in 1892, 85 in 1893, 60 in 1894, and 50 in 1895.

The Infectious Disease (Prevention) Act, 1890, was adopted November 13th, 1891, and it came into operation on December 31st, 1891.

SMALL POX.—A small outbreak occurred at Hermitage, a hamlet of Westbourne, in the spring of the year.

1. Isaac Wilkins, 49 years of age, had been lodging for the past year at the “Great Eastern,” Hermitage; he had no regular occupation as he was liable to “fits”; he felt ill on March 15th and 16th, and on March 17th, when a rash appeared, he was taken away to Westbourne Workhouse about 4 p.m. He was on his arrival there found to be suffering from small pox, so he was placed in a private room away from the main building, and a male inmate, who had small pox many years ago, was told off to nurse and look after him. In this way he was well isolated, and no one in the Workhouse contracted the disease.

The “Great Eastern,” is a small common lodging house and beer-house, and when Wilkins was removed, the place was occupied by Mr. and Mrs. Hedgecock with their two children and three other adult lodgers who had lived there for many months. No stranger had recently been staying there, but of course, many wayfarers had frequently called; yet, as far as they knew, no one had been noticed as having any rash on the face or hands, nor was any case known to be in the neighbourhood.

2. In a cottage at the Slipper, about fifty yards distant from this Inn, there dwelt Thomas Gilbert, 31 years of age, who lodged here with a family, named Kennett, consisting of the parents and three young children. This man, who often frequented the "Great Eastern," fell ill on April 3rd, and the rash of small pox appeared on April 5th; he had not been away from Hermitage since September 10th, 1895. All the six inmates of the cottage had been vaccinated in infancy, but not since, the two elder children were at once sent away.

Mrs. Gilbert, the mother of the patient, came to nurse him on April 9th; she had been inoculated when an infant, and had had small pox; Mrs. Kennett, her married daughter, had a mild attack of small pox about thirty years ago, at a time when one of her sons had a severe attack when the disease was then prevalent at Fareham. Mr. Kennett went away in an oyster smack on April 9th, so that there only remained in this house two women and one child, none of whom were attacked.

This cottage formed one of a short row of four houses, and in the other three houses there were six adults and eight children, none of whom caught the disease. One of these adults had had small pox in youth, all had been vaccinated in infancy; four adults and four children above two years of age were re-vaccinated successfully on April 11th.

3. On April 13th, William Hedgecock, the landlord of the "Great Eastern," felt poorly but went about his daily work till the 17th, when the rash of small pox appeared; he had been vaccinated in infancy but there was only one poor mark to be seen on the right arm. There was much difficulty in dealing with this case, as the inmates did not recognize the gravity of the disorder, nor would they believe at first that the disease was small pox at all. I managed to make them consent to have a trained nurse, who arrived on April 21st, and took charge of Hedgecock and Gilbert.

In the meantime the Inn had been practically closed as no one cared to go near the place, but after the 21st, the nurse saw that no one entered, and the doors were kept locked.

4. The disease also appeared in a semi-detached house at Gosden Green, Hermitage, about half a mile distant from the last two cases, occupied by a family named Chiddle, consisting of the parents and eight children, some of the children being young adults, and only three of them were under ten years of age. John Chiddle, 19 years old, was attacked on April 20th, and a few spots appeared on the 22nd; he felt poorly but he remained at work until April 23rd; the last occasion on which he visited the "Great Eastern," was April 9th. The house was large enough for the family, but it was very dirty and badly furnished. Next door there dwelt a family but none of them had the disease.

On April 24th I advised the District Council to take steps to isolate the two cases of small pox more effectually and to provide hospital accommodation for them and for any other cases that might arise.

A special Committee met at Emsworth on April 25th, and it was resolved that two hospital marquees, each holding eight beds, should be obtained from Messrs. Piggott Bros., of London, with beds and furniture for eight patients, and that they should be erected on Westbourne Common, on an isolated site which had already been purchased some months before for an isolation hospital.

The tents were sent down and put up on April 29th, and a temporary wooden building was erected and fitted up for administrative purposes.

On April 30th I removed the three patients from Hermitage in an ambulance kindly place at the disposal of the Council by the Havant Sanitary Authority ; they were moved without any trouble and a trained nurse accompanied them.

The rooms which the patients occupied were fumigated the same day, and the bedding and clothing used were burnt at once. No other case arose in any of these houses.

The patients were well nursed, and in due course they all recovered. The man Wilkins was removed from the Workhouse to the tents, and the man Neames, who had nursed him, was kept at the temporary hospital, and proved useful in many ways.

5. On May 24th a fifth case of small pox was notified at Foster's Row, Hermitage, about a quarter of a mile from the "Great Eastern." In a cottage at the north end of this row there dwelt a family named Cheesam, consisting of the parents, two young children and an aged mother. Arthur Farndall, 22 years of age, came to stay at this house on May 18th, after having been at sea for ten days in a boat with a crew of five other men engaged in dredging for oysters off the French coast. He was at Hermitage from May 4th to May 8th, when he went for this short voyage. He did not land in France, nor was he aware of having come in contact with anyone suffering from small pox ; nor were any of his comrades ill then or afterwards. On May 22nd he felt poorly when out for a walk with headache, sickness and pain in the stomach ; on the 24th the rash appeared. All the inmates of this house had been vaccinated in infancy, and there were three good marks on Farndall's left arm, but he had never been revaccinated. Mrs. Cheesam had been revaccinated on April 20th, and Mr. Cheesam on April 25th ; in each case with successful result. The patient was at once removed in the ambulance to the tents, the house was disinfected, and some bedding was burnt. No other case arose, and the outbreak now ceased.

None of the patients had a very severe attack, and in each case the variola was in a modified form ; all the patients recovered, and no one caught the disease from the initial cases in the private houses, although several persons were exposed to danger, and mixed with the patients after the rash had appeared.

In the four houses whence the cases were taken there lived twenty adults and eleven children under fifteen years of age, while at the "Great Eastern," there were many others who frequented the place up to April 21st.

		Inmates.						Cases.			
		Adults.		Children.				Adults.		Children.	
		M.	F.	M.	F.			M.	F.	M.	F.
1	..	5	1	1	1	..		2	—	—	—
2	..	2	2	1	2	..		1	—	—	—
3	..	5	1	3	1	..		1	—	—	—
4	..	2	2	1	1	..		1	—	—	—
		—	—	—	—	..		—	—	—	—
Total	..	14	6	6	5	..		5	—	—	—

A large number of persons at Hermitage were revaccinated, especially those living in houses close to the infected area. Nurse Knight looked after the cases effectually without any other aid, except that of the man Neames, who went on errands and helped in various ways.

The cost of the marquees, &c., was £132 4s. 4d., and the temporary building cost £50 12s. 5d.

As these structures will be useful on any future occasion, I have taken one-third of this outlay as chargeable to this outbreak in considering the expenses incurred.

The total amount is shown on the following scheme, but it does not include a minor charge for the maintenance of Wilkins in the Workhouse for about five weeks :—

	£	s.	d.
Two Hospital Marquees, with beds and furniture for eight beds, wooden floor, &c.	132	4	4
Temporary building for administrative purposes	50	12	5
	£182	16	9

One-third of the above capital outlay	60	18	11
Nurse	35	11	0
Bedding and clothing	13	8	11
Groceries, meat, milk, &c.	24	6	7
Ambulance for conveyance of patients	1	3	0
Men employed to assist	6	18	4
Other expenses	12	6	
	£142	19	3

The first case probably arose from some tramp suffering from modified small pox visiting the "Great Eastern" some time early in March. This seems most likely, as at Worthing, Littlehampton, Portslade, and at some other places several cases occurred at that time or soon afterwards which were clearly traceable to infected tramps passing from one

common lodging-house to another. The incubation period is not clearly shown, but the date when the rash first appeared in each case is here given :—

1. March 17.
2. April 5.
3. „ 17.
4. „ 22.
5. May 24.

The dates are very irregular, and it is quite possible that there may have been one or two other infected persons who had the disease in so mild a form that they went about as usual without being aware of any danger.

The outbreak was stopped by the prompt action of the Rural District Council in adopting measures of isolation, and I am also much indebted to Dr. Lockhart Stephens, whose services were very valuable on this occasion.

In 1895 the Council bought a piece of land, about $2\frac{1}{4}$ acres in extent, on Westbourne Common, for £50, with the view of erecting an isolation hospital for the use of the whole district. The plans were being prepared when the above outbreak occurred, but the hospital was begun in the autumn, and it will be finished early in 1897. The hospital was designed by Mr. N. C. H. Nesbit, of Winchester, and it seems admirably adapted for its purpose. The contract price for the erection is £1,027 11s., and this sum will be paid out of the rates in three half-yearly instalments.

DIPHTHERIA caused two deaths in a cottage at Compton in November; the children were very unhealthy and delicate. These were the only death from infectious disease during the year.

WATER SUPPLY.

Bosham is a parish which contains 1,260 people. About 550 of this number live in 110 houses aggregated round or near the Parish Church. The main street runs north and south, and along its course there are 27 houses east of the main street, and facing the creek there are 44 houses. West of the main street and also facing the creek there are 40 houses. Most of the drinking water at Bosham is derived from a stream which rises at Ashling in the parish of Funtington, and running south it empties into Bosham Creek at the west end of the village. Some of the water from this stream passes through an iron pipe into a moat, and thence by another iron pipe into a ditch by the main road, and at this spot many people obtain their drinking water. Near the Gloucester Inn the stream in this ditch is divided, one part flowing on to the beach near Moore's house and another portion flowing nearly due east at the back of several houses and then turning south it flows into the creek. This ditch is used as a source for drinking water by most of the persons living on the banks, a few go higher up the bank, and two families are supplied from a

well. There was a sluice gate at the end of this ditch but this is now out of repair, so that in high tides salt water flows in, and for a time the water is brackish. Many persons throw their dirty water into this ditch so that the water cannot be considered fit for drinking purposes. The sides of the ditch are covered with weeds, and the water is covered with vegetation, and it contains an excess of organic matter.

On the west side of the main street there are no wells and every one goes to the brook for water. In the main street there are eight new houses and six of these are supplied by two wells which seem to yield good water, although in one case the well is only about six yards from a cesspit. Farther north and away from the creek the houses are more scattered and some of them have good wells, but still the majority go to the stream. Of the 111 houses about 15 are supplied from wells and 96 are supplied from the stream at some portion or other of its course. This stream contains soft water and there do not now appear to be any closets in Bosham which drain into it. The water is pretty clear in fine weather, and as it receives some of the drainage from the higher lands it contains the usual impurities of river waters. When the stream has passed the Union Chapel and entered the village it becomes liable to more pollution, and especially so in that portion which having passed through a muddy moat flows into a ditch along the main street and to the east of the village. Most persons complained of the inconvenience and waste of time experienced by fetching water such a distance, and a great many have expressed a wish for some kind of alteration.

I do not think it would be wise to dig wells for the houses along the creek, as the water would most likely be brackish, and during high tides the sea water might flow into the wells.

Any outlay in this way might lead to disappointment.

I think it would be better and cheaper to take the water from the brook above the Union Chapel, and then, after filtration through sand and gravel, carry it along the main road for about 250 yards, to a spot near the Gloucester Inn, while branch pipes running east and west, would afford an abundant supply of fresh water to each house in this district. Allowing ten gallons per head per day, about 5,000 gallons or 22 tons of water would be required daily. More than this quantity runs away to waste on the beach, so that no loss need ensue to any mill-owner by taking away the above amount of water from the stream.

This simple and inexpensive scheme for supplying Bosham with good water was much discussed at various meetings of the Rural District Council, and many were much in favour of it.

As some legal questions arose, the matter was referred to Mr. Dill, Q.C., for his opinion thereon, and he considered that the plan above stated would come under the head of new waterworks and thereby infringe the rights of the Chichester Waterworks Co., who have power to supply all this parish with water, and who would naturally oppose the scheme. There were also difficulties pointed out with regard to

mill owners' rights, and with regard to taking water from the moat, as in each case, opposition was sure to be met with. The whole matter now remains at a standstill; there is no probability of the Water Company at present providing any supply, while each day a vast quantity of good water runs away to sea, of which a small proportion which no riparian owner would miss might be used for the public benefit. The scheme was estimated to cost £250, or an annual charge for thirty years, including sinking fund, of £12 10s. If 100 householders paid one penny per week or one shilling a quarter, a sum of £20 would be raised which would defray all expenses.

LODGING HOUSES.

There is one Common Lodging House at Hermitage in which a few lodgers are taken; this is very well kept.

COWSHEDS AND DAIRIES

There are now twenty registered Cowsheds and Dairies, but many of them are on a very small scale; they are well kept.

MARGARINE.

Margarine is not much in demand, but in such cases the regulations of the Act are complied with; the sale seems to decrease.

BAKEHOUSES.

The Bakehouses are sixteen in number; they are often inspected, and they are kept in a clean condition; one new one has been erected, and one old one has been closed; one which has been disused is now used again.

SLAUGHTER HOUSES.

There are five Slaughter Houses which are very well attended to three of these are small and used occasionally.

ARTICLES OF FOOD.

There was no case in which it was necessary to condemn meat or any other Article of Food.

SUNSHINE.

The following figures have been kindly sent to me by the Rev. L. B. Birkett, M.A., from the observations taken by him at Westbourne Rectory.

	1893.	1894.	1895.	1896.	
	Hours.	Hours.	Hours.	Hours.	Sunless Days.
January	39·3	86·3	93·7	52·6	16
February	82·3	96·4	123·3	76·9	10
March ..	232·1	219·1	159·3	124·5	11
April ..	305·7	188·2	163·0	149·7	2
May ..	257·5	223·3	314·2	275·0	1
June ..	256·0	177·3	248·7	263·4	1
July ..	212·1	192·3	194·2	263·0	1
August..	248·9	162·5	223·8	170·2	2
September	169·7	140·2	248·8	108·1	5
October	136·3	96·4	108·6	137·8	3
November	65·5	91·1	53·7	97·1	8
December	64·6	67·8	51·4	46·6	8
Total	2,070·0	1,740·9	1,982·7	1,764·9	68

In 1890, there were 1,773·8 hours of bright sunshine, and 68 sunless days; in 1891, the numbers were 1,682·8 and 61; and in 1892, the numbers were 1856·8 and 65 respectively.

RAINFALL.

	1893.	1894.	1895.	1896.	
	Amount in inches.	Amount in inches.	Amount in inches.	Amount in inches.	No. of rainy days.
January	1·68	5·37	2·99	1·17	13
February	3·18	2·01	0·19	0·47	9
March ..	·60	1·65	2·13	3·44	25
April	·07	2·26	2·25	0·31	11
May ..	·95	1·01	·18	0·49	3
June ..	1·29	1·75	·70	1·75	12
July ..	4·55	5·38	4·78	0·90	9
August	1·10	2·14	3·23	1·91	14
September	2·04	3·19	·92	8·34	26
October	7·08	6·10	3·43	3·40	22
November	2·31	5·96	5·34	1·00	9
December	2·90	2·22	3·20	4·56	20
Total	27·75	39·04	29·34	27·74	173

The rainfall in 1890 amounted to 24·13in., in 1891 to 35·94in. and in 1892 to 26·05in.

Diameter of gauge, 5in. Height above ground, 1ft. 6in.; above sea level, 30ft.

INQUESTS.

Inquests were held in six cases:—Male, 3 days, injury during birth; male 38 years, suicide by shooting; male, 31 years, accidental fall downstairs; male 64 years, convulsions; male, 22 years, accidentally drowned; male 66 years, heart disease.

There were three deaths returned as “not certified” during the year:—Female, 6 weeks, convulsions; female 81 years, probably heart disease; male, 3 days, premature birth.

WESTBOURNE RURAL DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the fifteen years, 1881-95, and in 1896.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1881-85	...	551	91	42	33	23	152	210
1886-90	...	522	90	45	16	25	140	206
1891-95	...	582	105	48	42	23	141	223
Per 1,000	...	1,000	173	82	55	43	261	386
1896	...	97	10	7	4	7	32	37

WESTBOURNE RURAL DISTRICT.

TABLE 2.—Showing the Deaths from various causes in the fifteen years, 1881-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup	Fevers,					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1881-85 ...	—	1	18	—	—	12	—	—	1	—	4	1	9	6	—	—	52
1886-90 ...	—	—	4	—	—	7	—	—	—	—	1	6	17	3	1	3	42
1891-95 ...	—	—	26	2	—	3	—	—	1	—	3	8	9	12	4	38	106
1896 ...	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2	4
Total ...	—	1	50	2	—	22	—	—	2	—	8	15	35	21	5	43	204

WESTBOURNE RURAL DISTRICT.

TABLE 3.—Showing the Death-rate per 100,000 persons living from all causes, and from various causes, in different localities, during the fifteen years, 1881-95, and the Death-rate in 1896.

LOCALITY.				All Diseases.	Notifiable.	Non-notifiable.	Phthisis.	Lung Disease.	Heart Disease.
Funtington Parish	..			1,538	115	58	115	308	128
Bosham Parish	..			1,645	74	90	106	291	122
Westbourne Parish	..			1,645	79	60	156	344	115
Rest of District	..			1,371	60	76	112	257	93
Mean	..	..		1,501	77	71	123	293	107
PERIOD.									
1881-85	..	..		1,473	98	43	123	261	117
1886-90	..	..		1,376	33	75	136	279	97
1891-95	..	..		1,653	99	94	111	338	108
1896	..	..		1,395	29	—	100	201	86

(A)—Table of DEATHS during the Year 1896, in the WESTBOURNE DISTRICT

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (j)	Scarlatina. (k)
Funtington Parish	10	—	1	2	1	3	3	Under 5 5 upwards.		
Bosham Parish	12	2	—	—	2	5	3	Under 5 5 upwards.		
Westbourne Parish	31	2	3	1	3	9	13	Under 5 5 upwards.		
Rest of District	33	6	3	1	—	11	12	Under 5 5 upwards.		
Westbourne Workhouse ...	11	—	—	—	1	4	6	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS.....	97	10	7	4	7	32	37	Under 5 5 upwards.		
The subjoined numbers have also to be taken into account.										
Deaths occurring outside the District among persons belonging thereto.....								Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto...								Under 5 5 upwards.		

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES

Officer of Health, during the year 1896, in the WESTBOURN DISTRICT

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK COMING TO THE KNOWLEDGE OF THE OFFICER OF HEALTH.					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS	
(a)	(b)	(c)	(d)	(e)					Typhus.	Enteric.
Funtington Parish	1,020	1,000	17	Under 5 5 upwards.						
Bosham Parish	1,258	1,270	31	Under 5 5 upwards.		1				3
Westbourne Parish	2,269	2,250	57	Under 5 5 upwards.	5	7	3			2
Rest of District	2,397	2,330	72	Under 5 5 upwards.		4	4			2
Westbourne Workhouse ...	140	100	2	Under 5 5 upwards.			1			
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	7,084	6,950	179	Under 5 5 upwards.	5	12	2 8			2 16

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
 District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

WORTHING URBAN DISTRICT.

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WORTHING URBAN DISTRICT.

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	584	584	979	1,425
Number of Inhabited Houses ..	1,051	1,331	1,959	3,015
„ Uninhabited „ ..	51	129	178	174
„ Building „ ..	7	11	82	39
Population	5,805	7,413	10,976	16,606
Males	2,497	3,174	4,701	6,874
Females	3,308	4,239	6,275	9,732
Persons to a House	5.52	5.57	5.51	5.51

The area of this Urban Sanitary District was extended to include the civil parish of Heene, and the District was incorporated as a Municipal Borough by a charter dated 15th August, 1890.

The above figures, previous to 1891, only deal with the old Local Board District of Worthing.

The changes which have taken place in the area and population in recent years have been described in my last Annual Report to which reference should be made by those interested in the matter.

When, on September 3rd, 1890, Worthing became a Municipal Borough, the whole area was divided into five wards.

The mean number of persons in each house in each ward at the last census is here shown :—

	Houses.	Mean No. of Inmates per House.
1. East Ward	510	5.4
2. Central Ward	1,091	5.7
3. North-east Ward	566	5.6
4. North-west Ward	575	5.0
5. West Ward	273	6.1
Total ..	3,015	5.5

The West Ward has the highest mean number, but the houses are on the average much larger than in the rest of the district, and a large number of servants are kept ; there are also some large schools which increase the average in each house.

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 388 children were registered ; of these 193 were male, and 195 were female.

Estimating the population in the middle of the year at 19,200, the birth-rate was equal to 20·2 per 1,000 persons living, against a rate of 23·4 in 1891, 22·4 in 1892, 21·4 in 1893, 19·2 in 1894, and 19·6 in 1895.

The rate varies very much in each Ward, and it depends upon the distribution of married women living at the child-bearing ages. For this reason the rate is low in the West Ward, and high in the North-east and North-west Wards.

In each Ward the births for the past five years are here shown :—

No.	Ward.	1892.	1893.	1894.	1895.	1896.
1.	East	63	69	59	62	89
2.	Central	128	119	93	118	110
3.	North-east.....	82	77	69	55	69
4.	North-west	96	88	97	101	101
5.	West	17	20	21	26	19
Total		386	373	339	362	388

The general birth-rate is low, and it has been steadily declining for several years.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

It is of interest to compare the variations in the birth-rate during the last ten years under the Local Board, bearing in mind that the addition of the West Ward has slightly helped to lower the rate.

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ..	324 ..	29·2	1886 ..	366 ..	27·7
1882 ..	355 ..	30·7	1887 ..	327 ..	24·5
1883 ..	313 ..	25·7	1888 ..	322 ..	23·3
1884 ..	352 ..	27·8	1889 ..	362 ..	25·6
1885 ..	327 ..	25·0	1890 ..	338 ..	23·1

The decline in the birth-rate, not only here, but throughout the whole combined district, has been noticed at some length in the General Report. In the five-year period, 1876-80, the mean annual rate was equal to 27·4 per 1,000; in 1882, it reached its highest point (=30·7), and for that five-year period, 1881-85, it was equal to 27·7; in 1886-90, it declined to 24·8, while in 1891-95, it was only 21·2 per 1000; in the last two years, the rate has shown a still further fall.

This change is not confined to West Sussex, but it is common to the whole of England and Wales.

In the meantime the population in Worthing is increasing rapidly, the number of new houses occupied since the census of 1891 shows a more rapid growth of the population of the Borough in the last few years than at any previous period.

GENERAL MORTALITY.

There were 289 deaths registered in this district during the year 1896, but to this number must be added the deaths of eleven persons belonging to this district in East Preston Workhouse, which is outside the area. From this total number of 300 there must be deducted the death of one person in the Worthing Infirmary, who came from outside the district, leaving a total of 299 deaths.

Estimating the population in the middle of the year at 19,200, the death-rate was equal to 15·6 per 1,000 persons living; excluding persons not belonging to the district, the rate was equal to 14·4 per 1,000.

The variations in the death-rate in the Local Board District during the ten years previous to 1891 were as follows:—

Year.	Deaths.		Death-rate.	
	Including Visitors.	Excluding Visitors.	Including Visitors.	Excluding Visitors.
1881.....	170	150	15·3	13·5
1882.....	160	142	13·8	12·3
1883.....	164	151	13·4	12·4
1884.....	205	177	16·2	14·0
1885.....	178	161	13·6	12·3
1886.....	228	210	17·2	15·9
1887.....	231	206	17·3	15·4
1888.....	220	187	15·9	13·5
1889.....	179	145	12·6	10·2
1890.....	218	181	14·9	12·3

The following tables show the deaths in each Ward occurring in a population estimated in the middle of the year at 19,200; it includes the deaths of all persons not belonging to the district, and also the eleven workhouse deaths. The corresponding figures for the four previous years are also given.

DEATHS.

No.	Ward.	1892.	1893.	Deaths, 1894.	1895.	1896.
1.	East	28	76	53	44	54
2.	Central	103	139	82	100	92
3.	North-east ..	42	76	27	41	55
4.	North-west ..	49	94	44	71	78
5.	West	26	41	16	32	20
Total		248	426	222	288	299

The mortality in each quarter of the past four years is here shown :—

	Total. 1893.	Total. 1894.	Total. 1895.	Total. 1896.	M.	F.
First Quarter ..	73	55	97	80	39	41
Second Quarter ..	112	53	60	65	28	37
Third Quarter ..	181	47	62	70	42	28
Fourth Quarter ..	60	67	69	84	41	43
Total	426	222	288	299	150	149

The deaths in each quarter at various "groups of years are here shown :—

	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 65	65 and over.	Total.
First Quarter ..	8	9	16	2	23	22	80
Second Quarter ...	9	7	9	1	18	21	65
Third Quarter ..	17	11	4	1	19	18	70
Fourth Quarter ..	19	16	4	2	17	26	84
	53	43	33	6	77	87	299

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

No.	Ward.	Births.	Deaths under one year.	Ratio to 1,000 Births.	Ratio in			
					1892.	1893.	1894.	1895.
1.	East	89	9	101	32	159	102	97
2.	Central	110	21	191	109	84	107	93
3.	North-east ..	69	8	116	49	143	101	145
4.	North-west ..	101	11	109	95	227	144	128
5.	West	19	4	210	59	100	95	423
Total		388	53	136	78	145	115	135

The mean ratio for the past five years is 122 deaths to 1,000 births.

The rate of infant mortality in the Local Board District for the ten years, 1881-90, was in :—

Year.	Ratio.	Year.	Ratio.
1881 ..	86	1886 ..	147
1882 ..	95	1887 ..	100
1883 ..	105	1888 ..	93
1884 ..	122	1889 ..	77
1885 ..	88	1890 ..	136

giving a mean ratio for that decade of 105 deaths to 1,000 births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 43 in the case of those which are notifiable, and 24 in the other class where the number of cases cannot be obtained, or a total of 67 deaths in all, with a zymotic mortality of 3.49 per 1,000.

	Cases.	Deaths.
Small Pox	17	none
Scarlatina	23	none
Diphtheria	131	39
Membranous Croup	2	1
Fevers. { Typhus	none	none
{ Enteric	6	2
{ Continued	none	none
{ Relapsing	none	none
{ Puerperal	3	1
Cholera	none	none
Erysipelas	10	none
Total	192	43

In the other class the deaths were as follows:—

	Deaths.
Measles	15
Whooping Cough	4
Diarrhoea and Dysentery	3
Rheumatic Fever	2
Total	24

There were also two deaths from Influenza during the year.

The Infectious Disease (Notification) Act, 1889, came into force on August 3rd, 1890. There is no Isolation Hospital in the district.

The Infectious Disease (Prevention) Act, 1890, came into operation on July 4th, 1891.

The Public Health Acts Amendment Act, 1890, came into operation on July 4th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	3	9	5	—	17
Scarlatina	4	8	1	10	23
Diphtheria	60	24	25	22	131
Membranous Croup	—	—	—	2	2
Enteric Fever ..	1	2	2	1	6
Continued Fever ..	—	—	—	—	—
Puerperal Fever ..	1	1	—	1	3
Erysipelas	2	2	4	2	10
	—	—	—	—	—
Total ..	71	46	37	38	192

SMALL POX.—William Glover, 42 years of age, a strolling player, known as Broncho Bill, had been wandering about the county for some weeks, generally staying at common lodging-houses. He came to the “ Volunteer ” at the end of February, and, after staying there a fortnight, he went to the “ Cricketers ” on March 13th, and he remained there until his removal to hospital. He felt poorly on the 13th, and on the 16th a rash appeared on his face and body, yet he went about the town as usual and came in contact with a number of people. Feeling worse on March 20th, he sought parish relief on the evening of that day, and he was notified as suffering from small pox at 7 p.m. I found him in the common room at the “ Cricketers ” sitting amongst fifteen other persons. On going across to the “ Volunteer ” and examining the inmates, I found a child, Carrie Ward, in bed with a younger sister, May, with the rash of small pox well developed, but no medical man had been called in. I also found a young man, Frederick Searle, in the common room, sitting amongst several other persons, who had several spots on his face, arms, and body of modified small pox. These three cases were at once removed to Swandean in an ambulance, and reached there at 9 p.m. on March 20th. The rooms were closed, fumigated, and cleansed; and the “ Cricketers ” was practically closed, as no other persons came to the house, and there were only three other male lodgers. At each inn, most of the lodgers left early next morning when they knew the nature of the illness, and none of these would be revaccinated. A few remained, and some of them were revaccinated, but there was much indifference on the part of those who had been exposed to danger. Carrie Ward, and her younger sister, May, were born in Madras, and they had never been vaccinated; they slept together in the same bed in a small room; another child slept in a second bed in the same room, but it did not have the disorder. The bed and bedding used by these three patients were removed to the ashyard and burnt, and the rooms were locked up until the fumigation and cleansing had been completed. The Ward family had been staying in this house for five months. As a great many persons had been exposed to infection from mixing freely with these initial cases, I had the two tents put up at Swandean, so that there was ample accommodation for a great many patients in case the need should arise. The common lodging houses and their inmates were visited every morning, and a

visit was also made each evening in case any fresh tramps should come in with the disease. This was the more necessary as at this time other small outbreaks had occurred in the Westbourne, Littlehampton, and Horsham Districts, all of which had their origin among tramps. No further case arose, however, until April 1st, when May Ward fell ill and she was removed to Swandean at once, the rash appearing in her case on April 2nd, the day after her arrival. On April 5th, I saw a man named Tiley, at the "Volunteer," who had been poorly two or three days, and now the rash of small pox was just appearing, so he was removed to Swandean at once. He had slept in the same room with case 1, at the "Cricketers," up to March 20th.; a third man also occupied the same room but he never had the disorder.

I have already mentioned that on the evening of March 20th there were several persons in the "common" room at the "Feathers." Most of them were men and women from the town, for there were only three lodgers at that time in the house. Amongst this group there were half-a-dozen young lads playing some game. Glover was in this small and crowded room, and they had all been there for an hour at least; they all left directly after my arrival. One of these lads was named Benn, and he lived with his parents at 31, Surrey-street.

The mother, Mrs. Benn, 44 years of age, was poorly on May 1st, she had a rash on May 3rd, and on that day she was removed to Swandean. A son, William Benn, 19 years old, was poorly on April 17th, and he had a few spots about him on April 21st. His case was never notified, nor did he see a medical man, but he went about the town as usual all the time. On May 4th, after his mother's illness was recognised, he was persuaded to go to Swandean for a few days. There were the remains of a few marks of modified variola, but he seemed quite well, and he was useful in doing work in the garden and in helping at Swandean. His brother who was at the "Cricketers" had a similar mild attack in the early part of April, but this case was never recognised, and the lad went about as usual. The father and two other children escaped.

There is a third inn called the "Feathers," where lodgers are taken in, and where part of the house is used as a common lodging-house. This place had been visited night and morning with no result until April 8th, when the landlady reported that a lad was staying there with a suspicious rash on him. This youth, Joseph Shepherd, 24 years old, had been staying for a fortnight at the "Spread Eagle," a common lodging-house at Littlehampton, where the landlady there had failed with small pox on March 23rd. He left this house on March 24th, and, staying in that town for two days, he went on to Chichester and Bognor, arriving at Worthing on March 29th; he found some employment by carrying an advertisement board about the town, although he felt poorly on April 4th, and on April 7th a few spots appeared on his face and body. He was taken at once to Swandean; the bedding he had used was burnt, and the room, &c., fumigated and cleansed.

This was a mild case, and it probably would never have been recognised if particular search had not been made for small pox. There

was now a lull for a fortnight, when a man, who had been staying at the "Feathers" for some weeks, felt poorly on April 21st, and on the evening of April 26th, the rash of variola appeared, and early next morning he was reported to me by the landlady, and he was at once taken in the ambulance to Swandean. This man, Sidney Standing, 59 years of age, was employed in doing odd work outside the Railway Station.

There now arose a fresh series of cases which apparently owed their origin to one common cause. Ellen Nye, 45 years, of no regular occupation, was found dead on April 14th at 54, Park Road. The body was removed from the house to the mortuary by three men, and a fourth man, Blake, helped to carry her into the mortuary, but he had not been at the house. The body was laid out by Mrs. Loveland, the attendant, and on the evening of April 15th a post-mortem examination was made, at which three medical men were present. There was no rash at all visible on the face or body, nor was there any indication externally that the patient had small pox. There was inflammation of an internal organ, and there was much evidence of fatty change in the heart and liver with general fluidity of the blood, staining of the large arteries, and some small hæmorrhagic spots in various organs. The conditions were those usually met with in cases of blood poisoning, but the nature of the blood poisoning was not evident, unless it arose from the small abscess in one ovary. The woman had been poorly two or three days, but she had gone about as usual until her death.

On April 26th I received information that Charles Nye, son of the deceased Ellen Nye, went to Eastbourne from Worthing on April 20th, as one of the Militia. He fell ill on the 23rd and had to go off duty, and on the next day, April 24th, he developed the characteristic rash of variola.

On April 28th three cases of small pox were notified from Broadwater, a village outside of the borough and about a mile to the north of it.

These three men, Carpenter, Meetens, and Green, were engaged at 6 p.m., on April 15th, in removing the deceased, Ellen Nye, from her house to the mortuary. Carpenter felt ill on April 26th, and a few spots appeared on the 27th; these were more numerous when I saw him on the evening of the 28th; Meetens and Green lived closed to, and each had a commencing rash. Early in the morning of the 29th, they were all removed to Swandean, each house was immediately fumigated and cleansed, and some bedding and clothing were burnt.

In these three houses in the main street of Broadwater, there dwelt seven other persons, but none of them caught the disease, nor was anyone else in the village attacked.

In the meanwhile, Mrs. Loveland, 51 years of age, had gone to West Tarring, a village north-west of, and about one mile from Worthing, to nurse Mrs. ———, who was confined on April 26th; on

the 29th this nurse was unwell, the next day a rash was seen, and on April 30th she was removed to Swandean. No other case occurred in the village.

This woman had never been to Nye's house, but she had charge of her clothes at the mortuary. Thus the four persons who were in close contact with the deceased woman took the small pox about a fortnight after exposure; the three medical men escaped altogether, and the four men who helped to bury the body on April 16th never caught the disease; nor did Blake who assisted for a few minutes on the 15th.

54, Park Road, was one of four small houses in a court off Park Road; the other three houses were occupied but all the inmates escaped. Miss Churcher, who owns No. 54, and who lives at No. 60, a house in the main road at the corner of this little court, went to the infected house at the time of her tenant's death, and on May 1st she felt poorly, on May 3rd the rash appeared, and on May 5th, she was removed to Swandean. These two houses, Nos. 54 and 60, were at once fumigated and cleansed, and they were kept closed until nearly the end of June. No one else in this neighbourhood had the disorder, but one more case occurred in connection with this death. A son of the deceased Ellen Nye, was anxious to attend his mother's funeral and for this purpose he borrowed a pair of black trousers from Thomas Cook, who lived at 98, Station Road. The son wore the trousers on April 16th, and returned them to Cook, on April 18th. Thomas Cook, 37 years old, was poorly on May 2nd, the rash first appeared late on May 5th, and on May 6th, he was removed to Swandean, the wife and seven children remained in the house and all escaped.

Amos Alderton, 20 years of age, living in a cottage at the back of Vainona in High Street was poorly on June 8th, the rash appeared on June 11th, and he was sent to Swandean on June 13th. In this cottage there also dwelt a Mr. and Mrs. Bowley, the wife's sister, and two young men. They were all engaged in hawking and selling fruit and flowers not only in Worthing but in neighbouring places. Caroline Deacon, sister to Mrs. Bowley, had had a few spots on her face and body two or three weeks previously, but she had gone about her outdoor work as usual, not being aware she was ill. It was this family that Alice Alderton visited on several occasions in June; she was ill early in July, and she spread the disease at Hangleton Court, Portslade, whither she went on July 2nd. This case was not recognised as small pox, nor was the real nature of the outbreak at Portslade recognised until July 18th. This outbreak is described on pp 24-29. On July 19th I admitted Alice Alderton into Swandean, where she remained isolated until she was convalescent; she then showed abundant evidence of having had modified variola.

At 9, Dagmar Street there lived another family closely related to the Bowley's, and in this cottage one of the bedrooms was occupied by two young men named Henry Deacon, 20 years old, and Israel Roberts, 22 years old, all of whom were engaged in the same industry.

Deacon was attacked on July 3rd, the rash appearing on the 4th, and he was removed to Swandean on the 6th, at the same Roberts was also removed, as he had been taken ill on the morning of that day.

Emma Deacon, 19 years old, a sister to Mrs. Bowley and to Henry Deacon, lodged at a house at the back of Chapel Fields, and she also sold flowers, and often visited or mixed with her relations. She was attacked on July 4th, the rash appeared on the evening of the 6th, and she was removed to Swandean early on the 7th.

The last case occurred on July 29th, when Joseph Pyle, 29 years of age, attended the Infirmary as an out patient on the morning of that day; the case was notified, and the man was at once removed to Swandean. After this date there were no more cases.

A man, 40 years of age, left the "Volunteer" on March 24th, soon after the first case occurred, and he developed small pox at Brighton on April 1st. Another man who had slept at the "Volunteer" on the night of April 17th, fell ill with small pox at a common lodging-house in Kensington on April 21st. Two tramps, who stayed at the "Spread Eagle," Littlehampton, when the landlady was attacked with small pox, and came on to the "Volunteer," where they met Broncho Bill about the middle of March, went on afterwards to Kensington, where one of the brothers, Christopher Cane, developed the disease on March 23rd.

There were altogether twenty-one cases admitted to Swandean; all had been vaccinated in infancy except Carry and May Ward; seventeen had attacks of moderate severity and four had the disorder in a more violent form; all recovered in due time. The ages of those attacked were thus distributed:—

			Under 15 years.	15 to 25.	25 to 45.	45 to 65.	65 and over.	Total.
Male	..	..	—	6	6	2	—	14
Female	..	...	2	2	1	1	1	7
			—	—	—	—	—	—
Total	.		2	8	7	3	1	21

The length of stay at Swandean varied very much, as some of the patients, when convalescent, remained some time longer, either to help in nursing, or to look after the garden, &c. With this assistance only one nurse was engaged, and I am much indebted to Nurse Taylor for her valuable services during this epidemic.

The outbreak lasted for five months and the cases naturally arranged themselves in several groups. Cases 1 to 7 formed one group in connection with tramps and common lodging houses; cases 8 to 11 with 14 and 15 were connected with the death of Ellen Nye. Cases 12 and 13 had no doubt some relation to the "Cricketers," while cases 16 to 20 among the flower sellers form a fourth group.

Summary of Cases of Small Pox admitted to Swandean in 1896.

No.	NAME.	Sex.	Age.	Rash first seen on.	Date of Admission.	Date of Discharge.	Result.
1	William Glover	M.	42	March 16	March 20	April 20	Recovery
2	Carrie Ward	F.	12	" 17	" 20	May 20	"
3	Frederick Searle	M.	17	" 18	" 20	" 4	"
4	May Ward	F.	5	April 2	April 1	" 20	"
5	William Tiley	M.	35	" 5	" 5	" 17	"
6	Joseph Shepherd	M.	24	" 7	" 27	June 27	"
7	Sidney Standing	M.	59	" 26	" 27	Aug. 10	"
8	William Carpenter	M.	53	" 27	" 29	May 23	"
9	Maurice Meetens	M.	34	" 28	" 29	June 13	"
10	William Green	M.	32	" 28	" 29	" 13	"
11	Mrs. Ellen Loveland	F.	51	" 29	" 30	" 20	"
12	Mrs. Fanny Benn	F.	44	May 1	May 3	" 20	"
13	William Benn..	M.	19	April 21	" 4	" 16	"
14	Miss Churcher	F.	68	May 3	" 5	May 20	"
15	Thomas Cook ..	M.	37	" 5	" 6	July 15	"
16	Amos Alderton	M.	20	June 11	June 13	" 23	"
17	Israel Roberts	M.	22	July 6	July 6	Aug. 15	"
18	Henry Deacon	M.	20	" 4	" 6	" 12	"
19	Emma Deacon	F.	19	" 6	" 7	" 12	"
20	Alice Alderton	F.	17	July 4	" 19	" 1	"
21	Joseph Pyle ..	M.	29	" 27	" 29	" 26	"

The great difficulty in stamping out the disease arose from the mildness of the attack, and no doubt many infected persons went about without knowing they were suffering from variola. A second difficulty arose from the fact that many medical men had never previously seen a case of small pox, and it was not easy to recognize the disorder in a mild form as modified by vaccination.

The measures of precaution adopted were :—Frequent visits to the common lodging-houses so as to detect early cases ; isolation, by immediate removal to Swandean ; destruction by burning of all infected bedding and clothing ; revaccination, when possible, of all persons who had been in contact with infected cases.

A great number of persons in the Borough were revaccinated, but many of the tramps who frequented the lodging-houses, refused the operation, and by leaving the town at once, they could not be traced.

DIPHTHERIA.—The epidemic of diphtheria, which first appeared in August, 1895, lingered on with much persistency throughout the year ; in the seventeen months there were 218 cases.

SEX.—There were 101 cases amongst males and 117 cases amongst females out of 218 persons attacked ; under fifteen years of age, the males were to the females as 93 to 96 ; at fifteen years of age and upwards there were more women attacked than men, probably because they came into closer contact than men with infected cases. Amongst adults, two medical men and two nurses had the disorder.

At the census of 1891, there were rather more boys than girls living in Worthing under fifteen years of age, and as this ratio doubtless exists at the present time, it appears that the incidence of the disease is rather greater amongst females than males ; the elder girls helped to nurse the younger children.

	Census, 1891.	Cases 1895-96.	Ratio per 1000.	Deaths.	Case mortality per cent.
Boys	2,797	93	33·2	33	35·5
Girls	2,703	96	35·5	32	33·3
Total under 15 years	5,500	189	34·4	65	34·4

There were 33 deaths amongst the 93 boys attacked and there were 32 deaths out of the 96 girls attacked, so that the male mortality was a little higher than the female ; at fifteen years of age and upwards there were no deaths.

AGE.—The accompanying table shows that the disease is most frequent from three to ten years of age, and that the case mortality is highest under five years of age :—

Children living.	Census, 1891.	Cases.		Per 1,000 living.	Deaths.		Case mortality per cent.	
Under five years	1,705	..	68	..	39·9	..	32	.. 47·1
Five to ten	1,834	..	94	..	51·2	..	29	.. 30·8
Ten to fifteen ..	1,961	..	27	..	13·7	..	4	.. 14·8
<hr/>								
Total under 15 years	5,500		189		34·4		65	34·4

At the ages, fifteen years and upwards, only twenty-nine persons were attacked, and all recovered.

Including the cases and deaths at all ages, the case mortality was reduced from 34·4 to 29·8 per cent.

Age.	Cases.			Deaths.				
	Male.	Female.	Total.	Male.	Female.	Total.		
Under one year	..	3	4	7	..	2	—	2
One to two years	..	3	2	5	..	1	2	3
Two to three	6	9	15	..	5	3	8
Three to four	7	10	17	..	1	6	7
Four to five	14	10	24	..	9	3	12
Five to six	8	11	19	..	4	3	7
Six to seven	7	13	20	..	1	5	6
Seven to eight..	..	11	6	17	..	2	4	6
Eight to nine	14	9	23	..	4	4	8
Nine to ten	9	6	15	..	1	1	2
Ten to eleven	3	2	5	..	2	—	2
Eleven to twelve	..	1	3	4	..	—	—	—
Twelve to thirteen	..	5	7	12	..	—	1	1
Thirteen to fourteen	..	1	1	2	..	—	—	—
Fourteen to fifteen	..	1	3	4	..	1	—	1
Fifteen to twenty	..	—	4	4	..	—	—	—
Twenty years and over		8	17	25	..	—	—	—
		—	—	—	..	—	—	—
Total	..	101	117	218		33	32	65

The cases and deaths occurring week by week are here shown :—

Week	1895.	Cases.	Deaths.	Week	1896.	Cases.	Dths.
ending Aug. 17	..	5	1	ending April 25	..	6	—
„ „ 24	..	none	2	„ May 2	..	1	1
„ „ 31	..	1	—	„ „ 9	..	2	1
„ Sept. 7	..	2	—	„ „ 16	..	1	—
„ „ 14	..	1	—	„ „ 23	..	none	—
„ „ 21	..	3	1	„ „ 30	..	1	—
„ „ 28	..	4	—	„ June 6	..	3	1
„ Oct. 5	..	11	2	„ „ 13	..	1	—
„ „ 12	..	16	4	„ „ 20	..	none	—
„ „ 19	..	1	2	„ „ 27	..	none	—
„ „ 26	..	4	1	„ July 4	..	none	—
„ Nov. 2	..	3	1	„ „ 11	..	1	1
„ „ 9	..	5	1	„ „ 18	..	1	—
„ „ 16	..	6	2	„ „ 25	..	3	—
„ „ 23	..	7	1	„ Aug. 1	..	1	2
„ „ 30	..	4	1	„ „ 8	..	2	—
„ Dec. 7	..	3	2	„ „ 15	..	1	—
„ „ 14	..	3	—	„ „ 22	..	none	—
„ „ 21	..	3	2	„ „ 29	..	none	—
„ „ 28	..	3	3	„ Sept. 5	..	4	—
1896.				„ „ 12	..	5	2
„ Jan. 4	..	4	—	„ „ 19	..	6	1
„ „ 11	..	5	1	„ „ 26	..	none	1
„ „ 18	..	2	—	„ Oct. 3	..	2	1
„ „ 25	..	5	1	„ „ 10	..	2	—
„ Feb. 1	..	6	3	„ „ 17	..	2	—
„ „ 8	..	3	—	„ „ 24	..	3	1
„ „ 15	..	9	1	„ „ 31	..	1	1
„ „ 22	..	11	1	„ Nov. 7	..	3	—
„ „ 29	..	5	6	„ „ 14	..	none	1
„ March 7	..	2	1	„ „ 21	..	none	—
„ „ 14	..	1	1	„ „ 28	..	1	1
„ „ 21	..	2	1	„ Dec. 5	..	none	—
„ „ 28	..	6	1	„ „ 12	..	none	—
„ April 4	..	3	1	„ „ 19	..	2	1
„ „ 11	..	3	2	„ „ 26	..	6	2
„ „ 18	..	4	1	„ Jan. 2, 1897		1	—

	Under 15 years.				15 years and over.				Total	
	Cases.	Deaths.	Case mortality per cent.		Cases.	Deaths.	Case mortality per cent.		Cases.	Case mortality per cent.
Hospital Tents	37	10	27·0	..	4	none	nil	..	41	23·9
Swandean ..	40	16	40·0	..	2	none	nil	..	42	38·1
Home ..	112	39	34·8	..	23	none	nil	..	135	28·9
Total ..	189	65	34·4		29	none	nil		218	29·8

The case mortality did not vary much during the epidemic :—

Period.	Cases.	Deaths.	Case mortality per cent.
Aug. 12 to Dec. 31, 1895 ..	87	26	29·9
Jan. 1 to June 30, 1896 ..	84	24	28·6
July 1 to Dec. 31, 1896 ..	47	15	31·9
Whole Period ..	218	65	29·8

ACTION TAKEN.—During August diphtheria had only appeared in two houses in Howard Street ; up to September 22nd, there were fresh cases in four other houses, the inmates of which had been in communication more or less directly with the initial cases. On September 28th to 30th there were three more children attacked in three fresh houses in the same Ward, and not far from the house where the disorder first broke out, but in these instances no direct communication could be traced.

On September 30th I advised the Sanitary Committee to have two tents erected in an isolated area at the east end of the town belonging to the Corporation. This plan was agreed to at once, and by the evening of the next day, October 1st, two of Piggott's Hospital tents were put up and made ready to receive patients. A shed on the area, made of wood and covered with corrugated iron—in which the tents had been previously stored—was used for cooking and domestic purposes ; water was laid on from the public main, and a trench was dug for receiving excreta, &c., and each day dry earth was thrown in, and a wooden sentry box was so arranged that it could be pushed forward a foot or so, when the trench underneath was filled up from the back. The arrangements were just completed when fresh notifications came in much faster. Each tent held eight beds, and on October 2nd three patients were admitted, and they were attended by two trained nurses, while a woman was employed as cook, and a man was kept to do the heavier work and to go on errands, &c.

The removal to the tents followed as quickly as possible the notification, and, in many cases, within one or two hours ; the removal was at once followed up by disinfection with burning sulphur of the infected house and by the flushing of the house drain with hose and abundance of water. From October 1st to October 12th inclusive, twenty-five fresh cases were notified in the Borough and one child in the adjacent village of West Tarring, who attended Holy Trinity School in the North-West Ward. From October 2nd to October 12th inclusive,

twenty-three cases were admitted into the tents, including the West Tarring case. Of these 23 admissions, 4 were amongst those who failed in September, and 19 were amongst those 26 who failed in the first twelve days of October.

After October 12th there was a lull, and no fresh cases were reported for a week. Then 1 case was notified on October 19th, 1 on October 21st, 1 on October 23rd, 25th, and 26th, 1 on October 29th, 2 on October 31st, and 3 on November 4th. Of these eleven cases, 7 were at once removed to the tents, the remaining 4 being treated at home.

During October there were seven deaths in the tents, including the West Tarring case; two were discharged on October 11th and two on October 14th, these being among the earlier attacks in September; on October 27th one more, and on October 29th seven more were discharged. Thus there was no overcrowding in the tents, and a vacant bed was filled up as soon as it was empty. In spite of these removals, fresh cases still cropped up in different parts of the town, and from November 5th to December 7th inclusive there were 25 fresh notifications, and twelve of these patients were quickly removed to the tents.

In the meantime, Holy Trinity Schools, in the North-West Ward (Howard Street), were closed from October 4th for a period of six weeks, because the brunt of the outbreak in its earlier period fell especially on those children attending this public elementary school. The other schools in the town were not at this period closed, because there was no special incidence of the disease among their scholars.

It was very evident that neither the closing of the school nor the early removal of the infected children had availed to stop the epidemic. All children from an infected house were kept away from school, and yet, with slight intervals, fresh cases kept appearing each week.

It also seemed clear with the near approach of winter that in a very inclement season the tents might not be a suitable place for young children with diphtheria.

It happened just at this period that "Swandean" was for sale. Swandean is a large private house with seven acres of land, situated about three miles from the centre of the Borough, and well placed in an elevated spot on the chalk Downs and facing south.

This house lent itself admirably for the purpose of a hospital, and after visiting the place on November 23rd, I reported formally on November 26th. The place was purchased for £2,500, and on December 7th it was ready for occupation. On the morning of December 7th, 11 patients remained in the tents, and on that day they were all safely removed to Swandean, many of them being nearly convalescent. These 11 children all recovered and returned home during December.

From December 8th, 1895, to January 17th, 1896, the cases diminished in number and during this period of six weeks, there were only 18 notifications, and of these, as many as 15 were at once removed to Swandean.

In the next fortnight, January 18th, to February 1st, there were 13 fresh cases and 8 removals, then a short lull with 3 new cases in the next week, and a rapid rise in the last three weeks of February when 25 cases were notified and 17 children were sent to Swandean.

Since this last rise was amongst children attending the Richmond Road and Davison Public Elementary Schools, these schools—the former for boys and the latter for girls and infants—in the Central Ward, were closed for one month from February 18th.

But since fresh cases appeared at the end of February I sent a circular letter to the Managers of each Sunday school asking them to close such schools for the three Sundays, March 1st, 8th, and 15th. Nearly all agreed to this course, and there was at once a marked decline, as only 2 cases were notified on March 3rd, 1 on March 9th, and none until March 19th. These 3 cases were in private houses, and they were nursed at home.

Up to March 18th 40 cases had been admitted to Swandean, but none since February 25th, so that those who remained were only 4 in number, and these were nearly well again.

On March 19th 2 more cases were notified, and these were at once sent to Swandean, where they died, and the remaining 4 were discharged by March 21st, and no fresh cases of diphtheria were admitted, as the hospital on March 20th was required for persons suffering from small pox.

The Richmond Road and Davison Schools were re-opened on March 18th ; the Sunday Schools on March 22nd. From March 23rd to March 29th there were 7 fresh cases, and then in the month of April 16 more notifications were received, and all the patients were treated at home. After April 26th there was a marked decline, and during the next six weeks there were only 4 cases, followed by 4 more between June 1st and June 10th.

As in most epidemics, the worst cases, or those likely to become the worst, were removed, and a few, almost in a dying condition, were taken to the tents, as well as to Swandean. Still the above figures show that the best results were obtained in the tents in spite of all changes of weather, and a similar result was obtained in 1893 during the epidemic of enteric fever.

The air in the tents was never so foul as in a room or ward, even when putrid sore throats were present. The constant passage of air through the double sheets of canvas was more efficient than the ordinary ventilation of a room ; nor was there at any time any draught felt by the patients as they lay in bed. When there was very rough and stormy weather the wind would sometimes blow up under the lower edges of the canvas, but not so as to cause any harm. The air in a room or ward was sometimes most foul when a very bad case was present, even when the door and window were open, and disinfectants were freely used. The tents were warmed by oil stoves.

METEOROLOGY.—The weather seemed to have no influence on the course of the epidemic.

The latter part of August was dry and warm. September was a very dry month with plenty of sunshine; and the last week was exceptionally hot. The first ten days of October were cool, wet, and dull, with boisterous gales; the last week was exceptionally cold. November and December were dull, wet, and mild. The weather in the first quarter of 1896 was above the average in temperature, but dull and deficient in sunshine. In April and May there was plenty of sunshine, a warm temperature, and for the whole five months a great deficiency of rain. Up to May 31st only 4·56in. of rain had fallen here in five months. During the three months, October to December, 1895, 11·86in. of rain fell. The last four months of the year were very wet.

WATER SUPPLY; DRAINAGE AND SEWERAGE; MILK SUPPLY.—There was no evidence that any one of these conditions affected the outbreak, either as a cause, or as a means of propagating or spreading the disease.

There still remains the question :—Why was the outbreak so prolonged when measures of isolation and limitation of school attendance, as well as disinfection and flushing of the drains, were persistently and steadily carried out? There must have been some condition potent for harm which remained throughout the whole period, and which could never be adequately dealt with. A general review of the whole subject and careful inquiry in every case has led me to the belief that the main reason of the spread was due to the existence of several infectious sore throats amongst children attending school which were never recognised as such.

Over and over again I found that at some period or other antecedent to a child having notified diphtheria, one or two other children in the same house had had sore throats previously, often so slight in its nature that the child was kept at home for three or four days or even a week, and then it would return to school to infect others.

When a school (day or Sunday) was closed for a time a lull could generally be noticed for a short time, as children would be less likely to spread the disease in the open air than in a close room. Sometimes one, two, or even three children would have sore throats in succession at intervals of a fortnight or three weeks, to be followed by a case so well marked as to be called diphtheria.

Nearly all the children attended public elementary schools. Nearly all were of the artisan or small shopkeeper class, and a considerable number were paupers, or became so when the disease appeared. The disorder did not appear amongst the lowest and dirtiest class, but far more commonly in small modern houses neatly kept, and in well kept, well paved streets with plenty of fresh air and good surroundings.

Many children were attacked who had had enteric fever in 1893. The disease was especially frequent in children of a scrofulous or tuberculous nature, so that the mortality was more due to the children providing a favourable culture ground for the disease germs than to anything else.

COST OF THE PATIENTS IN HOSPITAL.—The total cost of the 75 patients treated in the Hospital Tents and at Swandean in the year, from October 1st, 1895, to September 30th, 1896, amounted to £883 9s. 4d., of which sum £101 14s. was repaid by the East Preston Board of Guardians, and £29 14s. 6d. was repaid by private patients or from the Mayor's Fund.

WATER SUPPLY.

The new works for supplying the Borough with good water were completed at the end of the year. The well is situated at Broadwater, at a spot on the South Downs, two miles in a direct line north of the Town Hall. The shaft of the well is sunk to a depth of 119 feet and lined with a thick iron casing; at the bottom, headings have been driven, 150 feet in length, six feet high, and four feet wide, and lined with brickwork. On some rising ground on the hillside, one-third of a mile N.N.E. of the well, a large reservoir has been constructed. The great storage tank, which has a curved face, is 150 feet in diameter on top, and about 23 feet deep. The walls consist of a mass of concrete about seven feet at the base, and after the concrete, and next to the chalk where it is in excavation, comes a casing of stock bricks, nine inches thick, with four and a half inch toothings against the concrete. Then the whole of the walls, after this, are covered with half an inch of asphalte, and the asphalte is afterwards completely cased in with nine-inch Tunbridge Wells hard bricks. The floor of the reservoir is covered with ten inches of concrete, upon which is placed a thick coating of asphalte, which in this case, as distinguished from the walls, is exposed, and the weight of water will serve to keep it down. This reservoir provides a storage capacity of about a couple of million gallons, and as the average daily consumption does not at present exceed three-quarters of a million, it will be possible to keep a very respectable margin in reserve. The reservoir is supplied by a 16 inch delivery main, thence through a telescopic float, and the water will be discharged into the town by a 14 inch main; whilst a 12 inch pipe will enable the reservoir to be emptied when it is necessary to cleanse the tank. The reservoir will serve the double purpose of providing storage accommodation and of increasing the pressure, and all the pipes that discharge from and into it are governed by sluice valves. When pumped from the well the water is first delivered into a tank at the side of the engine, in the engine house, and then forced into the reservoir or direct into the town, as the case may be.

HARDNESS OF WATER.—Mr. Mansergh sent in the following estimate of the cost of softening the water from the new well :—

“This water, being obtained from the chalk measures, is ‘hard’ in two ways: there is the permanent and temporary hardness. It is with the temporary hardness alone that we are concerned at present. According to Dr. Dupré's analysis of the new well water the hardness is 14 to 14½ degrees after boiling. This reduction of the hardness means that the principal defect of chalk water has been removed. The most apparent change is that the softened water lathers freely and a

considerable saving in soap is effected. In addition the furring of boilers and kitchen utensils is practically done away with. Then again the softening process is one of the most effective germicides known and raises the water above suspicion, though this, perhaps, is not of great moment when one considers the great purity of the Broadwater yield.

“Softening chalk water makes it rank with the best and purest supplies in the land.

“In practice the reduction of the hardness to 6 degrees is obtained by mixing the hard water from the well with a clear saturated solution of lime water. An undefined chemical action is set up, and also considerable agitation, and there is a separation of minute white particles from the hard water which, when completed, leaves the water soft. When these particles have been intercepted the process of softening is complete.

“There are two methods of securing this end, both of which have in common the preparation of the saturated lime water.

“By the older of the two the hard water, after being mixed with the lime water, is turned into tanks, and allowed to come to rest when the separated particles precipitate themselves to the bottom, where they form a creamy white deposit. The clear top water is decanted off, and the tank is then ready for use again.

“By the newer method the treated water is made to flow through cotton filters. The cotton intercepts the white particles, but allows the clear soft water to pass through.

“There are successful examples of both methods in daily use on a large scale in England. On the question of capital expenditure there is not much to choose between them, but the tank method has the advantage of having the smaller working expenses. Of course the upkeep of tanks is less than that of cloth filters.

“I therefore recommend the tank process. It can be conveniently carried out on the site of the reservoir. The hard water would be pumped into the tanks and the soft water decanted into the reservoir, and thence supplied to the town.

“The cost of softening the water, including interest on the capital at $3\frac{1}{4}$ per. cent. and repayment of the principal in thirty years, together with the working expenses, will be less than a halfpenny per thousand gallons when the quantity softened is one million gallons per day.

“If we take one gallon per day as the average quantity used for or by each individual in personal ablution and cleansing, including washing of linen, floors, and all the uses of water for which soap or soda is required, and also have regard to the cost caused by the furring of boilers, etc., I am certain the whole of the annual expenses of softening the water would be recouped to the inhabitants by the saving in soap, fuel, scaling of boilers, etc., to say nothing of the greater comfort and cleanliness of using softened water.

“If you determine to make this addition to the works I am of opinion that your water supply will be second to none in the country.

“In answer to the inquiry of the Works Committee as to the capital expenditure required for the proposed water softening works and as to the annual expense of the process, I can shortly say that for dealing with one million gallons per day the capital cost for the works will be £6,200, and the working expenses £400 per annum.

“Perhaps the best way of putting the total annual cost is to say that for one million gallons per day the charges for repayment and interest on the capital, together with the working expenses, will amount to £730 per year.

“When the question of the action of the softened water on lead was put to me I had no misgivings whatever on the point, but, to make absolutely sure, I put myself in communication with Dr. Dupré, F.R.S. A sample of the water from the new well was taken and sent to him; he softened the water to 4 degrees on Clark's scale in the laboratory, and found that the softened water had no action whatever on lead.”

WATER ANALYSIS.—A *bacterioscopic* examination of the water from the Waterworks at Broadwater was made by Dr. Klein, F.R.S. early in May, 1896, and he sent the following satisfactory report ;—

“The water was contained in a gallon stone jar, was sealed and labelled, ‘Sample of water taken from new well at Broadwater, near Worthing, May 1st, at 4.30 p.m. Direct from pump barrel.’

“(1). The water was quite clear and limpid, and on being allowed to stand there were only traces of microscopic particles as sediment.

“Under the microscope these particles contained no animalculas. Here and there an amorphous granular mass and a few mycelial threads of fungus were seen.

“(2). The number of microbes was ascertained by gelatine plate cultivation and was found to amount to 120 per lcc.; this is a small number of microbes for well water.

“(3.) Twelve hundred cubic centimetres of the water were passed through a Berkefeld filter, the outside of the filter brushed off and distributed in sterile water, the amount of particulate matter of these 1200cc.'s was extremely small, and examined by means of phenolised plates yielded no bacillus coli. Several colonies that came up in these plates resembled superficially the bacillus coli; but in subcultures it was soon ascertained that they were not bacillus coli.

“From the extremely scanty amount of particulate matter suspended in the water, from the small number of microbes present in it, and from the absence of obnoxious microbes I consider the water of very good quality.”

A *chemical* examination of various waters was made by Dr. Dupré, F.R.S., and the analysis is given in the two tables appended.

ANALYTICAL DETAILS.

	I.	II.	A.	B.
Appearance	Clear	Clear	Slightly turbid	Clear.
Colour	Almost colourless	Almost colourless	Almost colourless	Almost colourless
Smell	Inodorous	Inodorous	None	None.
Deposit	None	Slight trace	Trace chiefly chalk	Trace chiefly chalk
Nitrous Acid	None	None	None	None.
Phosphoric Acid	Slight trace	Slight trace	Very strong trace	Trace.
Poisonous metals	None	None	None	None.
Hardness before boiling	17.5° (Clark)	17.5° (Clark)	14.° (Clark)	12.5° (Clark)
Hardness after boiling	4.5°	4.5° "	4.0° (Clark)	3.6° "
GRAINS PER GALLON.				
Oxygen absorbed from per- manganate	0.011	0.11	.0085	.0083.
Total dry residue	26.32	25.20	23.24	20.44.
Colour of residue	White	White	White	Nearly white.
Behaviour of residue on ignition	Darkens scarcely perceptible, burns off readily	Darkens scarcely perceptibly, burns off readily	Darkens scarcely perceptible	Darkness very slightly.
Chlorine	2.45	2.52	1.505	1.47.
Nitric Acid	1.01	1.12	1.72	1.54.
Ammonia	0.0011	0.0021	.0014	.0011.
Albumenoid Ammonia	0.0006	0.0008	.0031	.0026.

ANALYTICAL DETAILS.

	C.	D.	E.	F.
Appearance	Clear	Clear	Clear	Clear.
Colour	Almost colourless	Almost colourless	Almost colourless	Colourless.
Smell	None	None	None	Inodorous.
Deposit	Trace chiefly chalk	None	None	None.
Nitrous Acid	None	None	None	None.
Phosphoric Acid	Very strong trace	Trace	Trace	Extremely minutet trace
Poisonous metals	None	None	None	None.
Hardness before boiling	14.5° (Clark)	14.5° (Clark)	14.0° (Clark)	16° (Clark).
Hardness after boiling	3.7° (Clark)	4.0° (Clark)	3.8° (Clark)	4.4° (Clark).
GRAINS PER GALLON.				
Oxygen absorbed from per- manganate	·0083	·0076	·0083	·0098.
Total dry residue	22.12	22.96	22.40	21.84.
Colour of residue	Nearly white	White	White	White granular.
Behaviour of residue on ignition	Darkens very slightly	Darkens perceptible	Darkens scarcely perceptible	Does not blacken perceptibly.
Chlorine	1.505	1.575	1.575	1.61.
Nitric Acid	1.58	1.86	1.86	1.71.
Ammonia	·0018	None	None	0.0005
Albuminoid Ammonia	·0026	·00031	·00031	0.0005.

Sample I. and II. were taken from the West Worthing well ; sample B from the temporary works at Broadwater, and the remaining samples A, C, D, E, and F, were taken from the new well at Broadwater.

“ Each Sample contained in a stone jar, corked, sealed, and labelled respectively—

“ I. Water from test cock on pump barrel direct from well at the West Worthing Water Works, Worthing, taken at 1.30 January 27th, 1896.

“ II. Water from draw-off cock direct off water service in Mr. Elgin's House at the corner of St. Dunstan's Road, West Tarring, taken at 1.20 p.m. on January 27th, 1896.

“ Both waters are clear, and almost colourless.

“ No. I. yields no deposit, and No. II. only a few bits of straw.

“ Both waters are of moderate hardness, and become very soft on boiling.

“ No. I is of high organic purity, as shown by the minute amount of albumenoid ammonia yielded and the very small proportion of oxygen absorbed permanganate, and in every respect an excellent drinking water.

“ No. II. taken by itself would also have to be pronounced as of high organic purity, but a comparison with No. I. shows that it is slightly less pure, having apparently suffered some slight degree of deterioration in its passage through the mains to the point at which it was taken. It would be advisable to try to discover the cause of the deterioration.

“ A. Sample of water taken from new well at Broadwater, near Worthing, May 6th, 1895, 8 a.m., ‘direct from pump barrel.’

“ B. Sample of water taken from temporary supply works at 9.35 a.m., Friday, 17th, of May, 1895, ‘direct from pump barrel.’

“ C. Sample of water taken from the new well at Broadwater direct from the pump barrel at pump head, Friday, May 17th, 1895, at 9.45 a.m., water standing at 107 feet from surface.

“ D. Sample of water taken from east heading from the face of the chalk at the new well at Broadwater at 11.30 a.m., Friday, May 17th, 1895.

“ E. Sample of water taken from the face of chalk in south heading of the new well at Broadwater, at 11.30 a.m., Friday, May 17th, 1895.

“ The samples taken from the two headings (samples D and E) are first-class waters showing no indication to pollution of any kind. They are both pure chalk waters of a very moderate hardness as such, and are admirably adapted for drinking and domestic use generally.

“Sample A and C (new well from pump barrel) show slight traces of pollution by animal matter, indicating the existence of some local source of pollution.

“The water from the temporary supply works (B) is not quite so pure as samples (D and E) but is from a chemical point of view unobjectionable as a drinking water as well as for general domestic use.

“F. Sample received September 2nd, 1896, from the Resident Engineer, Worthing Waterworks, on behalf of Mr. Mansergh.

“Sample contained in a stoppered Winchester quart—no label.

“The water is clear, colourless, and inodorous. It is of remarkable organic purity, and shows no sign of pollution by sewage or surface drainage. Although as a water for general domestic use it might be better if the hardness could be reduced, it is, in its present condition, a first-class drinking water.

On February 25th, 1896, some water was sent to Dr. Klein (1) from the Temporary Waterworks at Broadwater, and (2) from a tap off the public main at Richmond Road School, and the following report was received:—

“Sample I.: This water contained an exceptionally small number of microbes, 60 per lcc. The water was quite limpid, and had no suspended matter.

“Sample II.: The number of microbes per lcc. was also very small, 68 per lcc. The water was limpid and contained no suspended matter. In neither sample was there any abnormal microbe present, so that both samples of water may be considered as good.

MILK SUPPLY.

ANALYSIS.—Six samples of milk were obtained from as many dairies in the town on February 24th, 1896; the milk was taken as sold to the public in the morning of that day; in each case the milk appeared good, but it appears from the analysis to be extremely rich in microbes. The samples were taken from the sellers, and they were not more than eight hours old, except in case D, when it was ascertained that the milk had been stored since the previous afternoon's milking.

The analysis is dated March 17th, but the time when the examination was begun is not given; in the course of twenty-four hours, microbes grow with great rapidity in milk, and in a letter which Dr. Klein afterwards wrote, he describes the state of fresh milk drawn from the cow under special conditions. 5cc. are equal to about one-teaspoonful, and as no one suffered from drinking this milk, it would appear that a vast quantity of microbes may be swallowed with impunity, provided that none of them are of a specific character.

“ All samples of milk (A-F) contained an enormous number of microbes, not inferior to that we find in milk that is hawked about in the streets of London.

“ Sample A contained 219,200 per lcc.

„	B	„	184,160	„	„
„	C	„	80,960	„	„
„	D	„	204,800	„	„
„	E	„	113,280	„	„
„	F	„	18,720	„	„

“ As stated just now, such enormous numbers of microbes are not unusual in milk that had been for some time and repeatedly exposed to contamination as is the case with milk that is carried about in open vessels in the London streets; but it must appear strange that milk which is supposed to be, and which looks, fresh and contains a good layer of cream—like the above samples—should harbour the excessive number of microbes mentioned above.

“ As to the character of the microbes in the six samples of milk everyone of them contained a great many bacillus cali, in addition to this, samples A, C, D, E, F, contained numerous proteous vulgaris, the last named microbe being the microbe of putrefaction.

“ On incubation at 37°C all samples became curdled in 24 to 48 hours, this curdling being produced by the rapid multiplication of the bacillus cali.

“ From the above facts I should be inclined to say that all the milk had been exposed to pollution, either by unclean vessels or water, or kept or collected in unclean places or afterwards being exposed to air charged with unclean dust.

“ All samples of milk were specially examined with a view to detecting the presence of the typhoid bacillus or the bacillus diphtheriæ; in each case special methods for the detection of these microbes were employed, but the result was negative.”

“ The number of bacteria in milk differs according to the manner in which the milk is obtained and the length of time it is kept exposed to the air and to the nature of the air.

“ In milk which I got from a normal milch cow, when the teat is thoroughly cleaned, when the milker's hands are previously thoroughly cleaned, when the milk is received into a sterile beaker and the milking is done in a clean shed, not in a cows' stable, in such milk there are no microbes to speak of; from such a scientifically clean milk, and milk just as is sold in the London streets, containing one quarter of a million of microbes per lcc. and more, there are obviously all intermediate grades dependent on (a) the nature of the utensils in which the milk is received at milking and later (b) the cows teats, (c) the place in which the milking is done and (d) the amount of subsequent exposure to filth, dust, &c. What surprised me was that the milk that was submitted to me from

Worthing, looking so normal, should have contained such an enormous number of microbes. The abundance of bacillus coli in it need not make the milk in the slightest degree abnormal, except that if such milk is left standing in a warm place it would soon curdle. What, however, the presence of an abundance of bacillus coli and proteus in milk proves, is that to that milk there had been added filth in one place or another (either from the filth-polluted cows' teat, or from the utensil or from the stable or later from the filthy dust). I know such additions, as matters stand, are unavoidable, but I think they are capable of limitation and therefore *good fresh milk* might, and should, not contain more than a portion of the number of microbes found in the Worthing milk, it certainly should not contain such an abundance of bacillus coli as the Worthing milk contained, the plates mark with 1/10cc. of some of the samples were literally crowded with bacillus coli."

SEWERAGE AND DRAINAGE.

A Local Government Board inquiry was held by Colonel J. T. Marsh on June 30th, 1896, in consequence of the Corporation having applied for sanction to borrow £11,967 for works of sewerage and sewage disposal, £330 for the purchase of the Steyne Gardens, and £200 for works of water supply. The original estimate for the sewerage works was £36,300, but at the time the inquiry was held respecting them, it was stated by Mr. Mansergh, the engineer, that the sum did not include the cost of any land that would be necessary for the outfall works. In fact, at that time the Council had not been able to agree as to the purchase of the land. They thought the price asked was excessive, but they were eventually advised by Mr. Mansergh that this particular land would have to be obtained, or otherwise there would be an increased cost for carrying out the works. The total cost of the land had been £2,751, of which £1,545 was for that portion (4a. 2r. 27p. in extent) on which the outfall works were constructed. The other 15 acres, it was hoped, would bring in a return of something like three per cent on the outlay. The deeds of conveyance were put in from Mr. W. W. Smith and the executors of the late Mr. E. Isted, the former owners of the land forming the site of the outfall works. The land bought of the former cost £376 17s. and that of the latter £500, while £62 1s. 6d. was paid to tenants as compensation. Two cottages were purchased for £550, it being necessary that there should be workmen close at hand so that in the event of a storm at night the excess of water that would come into the sewers might be disposed of. The sum charged the workmen as rent would pay the interest on the cottages. The total sum paid for land and the cottages was £2,751, the law charges amounting to £155. To complete the original works £673 was required for two short sewers in Heene and St. Botolph's Roads.

It was decided in 1893 to do the most necessary part of the sewage works first. At that time there were two outfalls in the Borough, one at Heene and the other at the eastern extremity of the district. Heene was included in the Borough in 1890. The principal defect of the old system was that at high water the sewers were tide locked, and when a storm occurred during the time of high tide the sewage was driven back

into the town. The first thing necessary was the erection of pumping plant to overcome the evil of tide locking; a new sewer was required from the Park through the town to Heene in order to intercept the Heene sewage; in connection with the pumping works tanks where necessary, so that they might store the sewage at such an elevation as to be enabled to discharge the sewage at the top of the tide; it was also necessary to extend the outfall, or rather to construct a new outfall 400 yards into the sea from high water mark, the outlet of which was below the lowest low tide. When the application for power to borrow the £36,000 was made, it was stated that it was the first instalment of the sewer system. In carrying out the work it was found that certain of the branch sewers were choked, having been badly laid, and instead of troubling the Local Government Board at the time they set to work and remedied the defects. The actual cost of the sewerage was £40,738, as against the sum of £36,000, which was the amount of the estimate given in on the 24th November, 1893. The £4,738 spent in excess of the estimate was due to the fact that the cost of the land on which the outfall works stood was not taken into account; that difficulties were encountered in laying the new sewer, and then there were several sums expended for making a shingle bed for the sewer in places where chalk marl and water were met with, for covering the sewer with cement to render it water-tight in those places, and for timber which, in consequence of the narrowness of Montague Street in some parts, had to be left in to support the water and gas mains. Then the cost of making good the defective branch sewers, and the defective house and gulley connections, came to over £2,000, and £450 was expended on seven shafts and ten columns for the ventilation of the sewer, public feeling being very strong against surface ventilation. In this new scheme the first great improvement noticeable was that the flooding and tide-locking were stopped. The new works of sewerage were completed in the summer of 1896, and since then they have been found to work most satisfactorily. An account of these works is given in my annual report for 1894.

PUBLIC ELEMENTARY SCHOOLS.

The School Attendance Committee having asked for a report on the Sanitary condition of the Public Elementary Schools in the Borough, the various Schools were inspected by me, and I sent in the following report to the Sanitary Committee, dated October 16th, 1896 :—

There are ten Public Elementary Schools in the Borough of Worthing, and some of them are in a good sanitary condition.

1. Christ Church School for girls and infants is well adapted for the purposes of a school; it is well-built, and the rooms are lofty and well ventilated,

2. Holy Trinity Schools are in good condition, except that some of the shooting round the eaves is out of repair, and the girls' playground requires to be weeded.

3. Heene Schools are in a very good state.

4. St. George's School for girls and infants is in a very good state.

5. St. Joseph's Catholic School is in a good sanitary condition ; the tar paving in the playgrounds requires repairing in some places.

6. Davison School for girls and infants is rather dark owing to the shade of some trees around, some of which might be removed. There is at present a small area of disused ground on the south side which might be used with advantage for the purposes of the school, and if bought, it would give more air space, and prevent any building being erected.

The five remaining schools are in a defective sanitary condition.

7. St. George's School for boys is wanting in good lighting, and a tree on the north side should be removed, as it has grown up in front of the window. The lobby is small, the school appliances are not of a modern type, the floor is boarded and causes much noise when the children move about.

The playground is rather small, covered with beach, having no shelter, and no gymnastic apparatus. I hear it is proposed to build on this area a new room and to widen the lobby ; this would have the effect of diminishing the present air space round the building.

8. Christ Church Boys' School is much inferior to the school for girls in that parish.

The site is small and the buildings are not well made ; there is no damp course, and some of the outer walls are damp, especially in the west cloak-room.

The class-rooms are lighted by skylights and windows on the east side ; these rooms are very hot in the summer, and the east windows cannot always be opened, as there is a public passage just below the windows. There are also trees opposite these windows which obstruct the light.

The ventilation is not good, as the skylights cannot be always opened in wet weather ; there are three fireplaces in the schoolroom, two of which are blocked up to allow of draught to the two tortoise stoves here.

The lobbies are small and stuffy.

The playground is small, and the school is much in want of air space around ; it is built on too small an area.

9. The Graham Road School is not well-adapted for the education of children ; it looks as if an ordinary house had been converted into a school ; the paved yard is too small for a playground, and the closets are much too close to the lobby and scullery.

The class-room, which is upstairs, is approached by a staircase, which also leads directly to some private rooms. The area is too small for a school, and private apartments and schoolrooms are too much mixed up.

10. The Mission School in Crescent Road is a large room, 51ft. by 25ft., formerly used as a mission-room. The walls are bare and rather dirty, and the south wall requires repairing. The school has nothing to do with the Education Department; it is kept by the Rev. J. O. Parr, who receives here a number of very poor children who would not be taken, probably, in other Elementary schools.

It seems well-adapted for its purpose, and it provides a schoolroom for many who would otherwise be in dirty houses or in the streets.

A well-kept flower garden on the north side, to which the children have access, is a bright feature of the place.

11. The worst school in the borough is the Boys' National School in Richmond Road. The buildings are very old and somewhat out of repair; the walls are damp for the want of a damp course, and the shooting to the roof is in many places defective. The interior of the rooms is clean, but the woodwork is very bare of paint, and the old boarded floors are very uneven. The schoolroom is gloomy and badly lighted; this is caused partly by a class-room overhead, and partly by trees growing in front of the windows. The class-room off the schoolroom is of low pitch, lighted by skylights, and so it is difficult to ventilate it; in the summer it is very hot, and in wet weather, when the skylights cannot be opened, the air becomes close and offensive. The lobby is small, and there are not enough pegs for the children's clothes.

The playground is very small, and it is surrounded by buildings which prevent free currents of air.

The light and ventilation to the w.c.'s are insufficient. In front of the entrance to the closets there is a wooden shelf with wash basins, which have no waste pipes or drains.

The chief defects in this school arise from its age, its general dilapidation, its gloom and want of all modern appliances, its dampness, and the small area on which the buildings stand.

WATER INSPECTION.

Five samples of water were taken :—

Two for chemical analysis were taken from the West Worthing supply and forwarded to Dr. Dupré, F.R.S., on January 27th.

Two for Bacterioscopic examination were taken from the temporary supply and forwarded to Dr. Klein, F.R.S., on February 25th.

One sample was taken from the surface water outfall near Warwick Buildings and submitted to the Medical Officer of Health.

The reports on the above were sent to your Committee.

Six samples of milk were taken for Bacterioscopic examination on February 24th, and forwarded to Dr. Klein, F.R.S., this report was also submitted to you.

HOUSE TO HOUSE SURVEY.

This work has been proceeded with as occasion permitted during the year, and the summary will show the amount of work carried out during the year.

SUMMARY.

One hundred and forty-three notices were served for the abatement of nuisances and remedying of sanitary defects under Sec. 91-94.

Thirty-seven notices under Sec. 5 of the Infectious Disease Prevention Act on the certificate of the Medical Officer of Health.

Four notices to white-wash and cleanse were served on the certificate of the Medical Officer of Health, under Sec. 46, Public Health Act, 1875.

Seven notices under Part II of the Housing of the Working Classes Act, 1890.

Forty-six notices under Sec. 41 of the Public Health Act, 1875.

Four hundred and fifty letters were written in conjunction with these matters.

W.C.'s SUPPLIED DIRECT FROM WATER MAINS.—Those that were found supplied in this manner were disconnected and supplied by means of syphon flushing cisterns.

W.C.'s FOUL AND DEFECTIVE.—Such w.c.'s were replaced by new pans and traps or cleansed.

HOUSES REDRAINED.—One hundred and nine houses were redrained with watertight drains and means of access and ventilation provided to the same. The drains of ninety-seven were amended.

DRAINS STOPPED.—Thirteen were found to be choked. These were opened up, the defects remedied, and put in good order.

DRAINS UNVENTILATED.—Twenty-nine were found unventilated. These were ventilated by 4in. ventilating shafts carried to a safe distance above all windows

WASTE-PIPES OF BATHS AND SINKS CONNECTED WITH SEWERS.—Fifty-nine were disconnected and made to discharge outside houses into channels leading to trapped stoneware gullies.

YARDS UNPAVED AND UNDRAINED.—Twenty-seven were repaved and drained, including one mews.

RAINWATER PIPES CONNECTED WITH DRAINS.—Seventy-four were disconnected.

ABSENCE OF DUSTBINS.—One hundred and sixty new galvanised iron dustbins were provided.

OVERCROWDING.—Six cases were abated.

OFFENSIVE POOLS.—One cesspool was reconstructed.

ANIMALS SO KEPT AS TO BE A NUISANCE.—Four cases were dealt with.

PROCEEDINGS BEFORE MAGISTRATES.—Eight summonses were taken out. Six were under the Housing of the Working Classes Act. One under Sec. 91-94 of Public Health Act, 1875. One under Sec. 116-117 of Public Health Act for unsound meat.

SYSTEMATIC INSPECTION.

The following is Mr. Gardner's sixth annual Report, showing the work carried out in this department during the year ending December 31st, 1896."

SLAUGHTER-HOUSES.

Slaughtering is carried on in five premises within the borough. The slaughter-houses are situated as follows :—

One in Brougham Road, E. Ward.

One in West Street, Central Ward.

Two in Little High Street, N.E. Ward.

One in Norfolk Street, N.W. Ward.

The owner of one of these premises in the N.E. Ward is about to close the slaughter-house and erect one in the East Ward.

Each was frequently visited during the year and found generally clean and well-conducted.

The owner of the one in West Street was found committing a breach of the by-laws and was cautioned by the Committee and required to give a written undertaking to observe the by-laws in the future.

BAKEHOUSES.

These have been periodically visited and found clean.

One new bakehouse has been built in the West Ward, one rebuilt in the Central Ward, and one is being erected in the N.W. Ward.

COMMON LODGING-HOUSES.

These have been frequently inspected, and found generally clean. During the first portion of the year there were only two registered houses, the Swan Inn, N.E. Ward, and the Volunteer, Market Street, in the Central Ward. Another House in the Central Ward (the Feathers Inn, Chapel Street) was found to be used as a Common Lodging-house, and was registered as such, the sleeping accommodation here has not been definitely fixed yet.

DAIRIES AND MILK SHOPS.

The regulations in force have been observed.

Two milk sellers were registered during the year, one in the N.W. and one in the E. Ward.

BUTCHERS, FISH, AND PROVISION SHOPS.

These were visited to ascertain whether any article of food was exposed for sale, or in course of preparation for sale, which was unfit for food of man.

In one instance a quantity of mutton was seized, condemned, and destroyed. Proceedings were taken out against the owner, but the case was dismissed as exposure for sale was not proved.

A quantity of herrings, by consent of the owner, were destroyed in August.

MARGARINE ACT.

The provisions of this Act are observed where margarine is sold.

SALE OF FOOD AND DRUGS ACT.

No samples of food or drugs were purchased for analysis, as this work is now done by the County Council.

PUBLIC ELEMENTARY SCHOOLS.

The schools were examined by direction of the Sanitary Committee. Plans of the premises were made, particulars of the air space and ventilation were obtained, and a report on the sanitary fittings submitted to the Medical Officer of Health.

FACTORIES AND WORKSHOPS.

There are no large factories within the borough. A list of the workshops included in the recent Factory Acts was received from the Factory Inspector. No important action was taken during the year owing to other pressing work in hand.

HOUSES UNFIT FOR HUMAN HABITATION.

The Magisterial proceedings pending *re* No. 11, King's Row, mentioned in last year's report, were taken in May, and a closing order was obtained.

The following were reported during the year as unfit for habitation :—

- (1). West Ward : Two cottages in Heene Road.
- (2). North-West Ward : A dwelling over a stable at back of Park Crescent.
- (3). Central Ward : Nony Cottage, High Street.
- (4). Central Ward : No. 4, George Street, a dwelling over a stable.
- (5). East Ward : Nos. 51, 52, 53, and 55, Park Road.

Closing orders were obtained in cases No. 1, 2, 3, and 4. In No. 5 the case was adjourned to enable the owners to render the premises fit for habitation.

HOUSES DEMOLISHED.

The two houses in Heene Road, for which a closing order was obtained were demolished by the owner.

INFECTIOUS DISEASE.

One hundred and eighty-two cases were inquired into and fifty-four patients were removed to Swandean. Disinfectants were supplied free of charge; where necessary disinfection was carried out at the houses and the premises cleansed on the certificate of the Medical Officer of Health.

Seventeen of the above cases were small pox and much extra work was thrown on the department in tracing the cases, moving to hospitals, and disinfecting and destroying clothing, etc.

COMPLAINTS.

Twenty-eight complaints were received, each was promptly investigated, and notices were served for the abatement of the defects discovered.

Nine written applications were received under Sec. 41 of the Public Health Act 1875; they include the drainage of the following 54 houses :—

(1). Two houses in Victoria Road, where it was found necessary to relay the whole of the drain.

(2). Seven houses in King Street, where the drainage was found to require amendment.

(3). Seven houses in Gordon Road, where the drains require reconstructing. Proceedings are pending.

(4). Seven houses in Tarring Road, where the drainage was found to require amendment, and the work proceeded.

(5). Six houses in Howard Street, where the drainage was found to require reconstruction throughout. Proceedings are pending in this case.

(6). Seven houses in South Street, where the drainage was found to require reconstruction throughout. The owner of one has redrained, and proceedings are pending in the other six.

(7). Six houses and premises in North Street, High Street, and Little High Street, where the drains were found to require reconstruction. The public sewer taking this drainage was found to require amendment, and the work has been carried out.

(8). Twelve houses in London Street, the drainage of which was found to require reconstruction, are awaiting proceedings.

INQUESTS.

Inquests were held in thirteen cases:—Female, 45 years, blood poisoning ; male, 43 years, suicide by hanging ; male, 73 years, death caused by taking an overdose of opium ; male, 65 years, syncope, heart disease ; female, 5 weeks, inflammation of kidneys ; male, 3, years, inflammation of the lungs ; male, 6 months, premature birth inanition ; male, 71 years, syncope due to fatty heart ; male, 77 years, accidental fall downstairs ; male, 77 years, heart disease ; male, 2 years, accidentally burnt while playing with matches ; female, 76 years, accidentally burnt ; male, 1 day, premature birth.

There was one death returned as “not certified ” during the year 1896 :—Female, 53 years, phthisis.

RAINFALL.

A full account of the rainfall in Worthing will be found in the General Report ; also a description of the climate over a long term of years.

WORTHING URBAN DISTRICT.

TABLE 1 — Showing the Deaths at various groups of ages in the ten years, 1886-95, and in 1896.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1886-90	...	1,076	191	122	44	55	339	325
1891-95	...	1,525	227	140	94	124	493	447
Per 1,000	...	1,000	160	101	53	69	320	297
1896	...	299	53	43	33	6	77	87

WORTHING URBAN DISTRICT.

TABLE 2.—Showing the Deaths from various causes, in the twenty years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80*...	—	19	7	—	—	7	1	—	3	—	1	13	25	28	2	—	106
1881-85*...	—	7	8	—	—	9	—	—	1	—	2	13	8	21	5	—	74
1886-90*...	—	8	11	—	—	6	—	—	—	—	3	7	46	22	2	—	105
1891-95†...	—	3	34	—	—	175	—	—	2	—	10	44	18	42	1	49	378
1896† ...	—	—	39	1	—	2	—	—	1	—	—	15	4	3	2	2	69
Total ...	—	37	99	1	—	199	1	—	7	—	16	92	101	116	12	51	732

*Local Board. †Municipal Borough.

WORTHING URBAN DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the twenty years, 1876-95, and in 1896.

PERIOD.	Deaths during the twenty-one years 1876-96 from					Mean Annual Death-rate per 100,000 living from					
	Population in middle of Period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
Including Visitors.	1876-80	827	107	90	93	77	1,695	219	184	188	157
	1881-85	877	74	87	115	98	1,450	122	143	190	161
	1886-90	1,076	106	111	149	137	1,560	156	161	217	198
	1891-95	1,525	329	116	184	151	1,747	377	153	212	172
	1896	299	67	20	32	38	1,557	349	104	166	198
Excluding Visitors.	1876-80	760	99	77	85	71	1,556	203	157	171	145
	1881-85	781	69	78	105	86	1,291	114	128	173	142
	1886-90	929	98	78	136	108	1,351	145	115	198	156
	1891-95	1,358	310	93	166	131	1,552	354	107	190	149
	1896	276	65	14	31	35	1,437	338	73	161	182

(A)—Table of DEATHS during the Year 1896, in the WORTHING

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox. (j)	Scarlatina. (k)	Diphtheria. (l)
East Ward	47	9	6	5	—	13	14	Under 5 5 upwards.			1 3
Central Ward	83	21	10	4	2	20	26	Under 5 5 upwards.			1 1
North-east Ward	48	8	9	4	1	13	13	Under 5 5 upwards.			5 2
North-west Ward	71	11	13	10	2	18	17	Under 5 5 upwards.			8 7
West Ward	20	4	1	1	—	6	8	Under 5 5 upwards.			
Infirmary	8	—	1	—	1	5	1	Under 5 5 upwards.			
Swandean	12	—	3	9	—	—	—	Under 5 5 upwards.			3 9
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	289	53	43	33	6	75	79	Under 5 5 upwards.			17 22
The subjoined numbers have also to be taken into account											
Deaths occurring outside the District among persons belonging thereto.....	11	—	—	—	—	3	8	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...	23	5	1	3	1	8	5	Under 5 5 upwards.			1

URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

													3				8	11
								1				1					4	6
											6		3				7	17

(B) —TABLE OF POPULATION, BIRTHS, AND OF NEW CASES

Officer of Health, during the year 1896, in the WORTHING

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS COMING TO THE KNOWLEDGE OF THE OFFICER OF HEALTH.					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric.
(a)	(b)	(c)	(d)	(e)						
East Ward	2,767	3,275	89	Under 5 5 upwards.	..... 3	..... 2	3 9	1.....	.....	.....
Central Ward	6,269	6,450	110	Under 5 5 upwards.	..... 11	2 6	4 23	.....	.....	..... 2
North-east Ward	2,936	3,400	69	Under 5 5 upwards.	..... 3	..... 1	16 25	.....	.....	..... 1
North-west Ward	2,917	3,700	101	Under 5 5 upwards.	.....	3 6	20 29	..... 1	.....	..... 2
West Ward	1,692	2,350	19	Under 5 5 upwards.	.....	..... 3	..... 2	.....	.....	..... 1
Worthing Infirmary	25	25	—	Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
				Under 5 5 upwards.	.....	.....	.....	.....	.....	.....
TOTALS	16,606	19,200	388	Under 5 5 upwards.	..... 17	5 18	43 88	1 1	.....	..... 5

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical-
Urban District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

LITTLEHAMPTON URBAN DISTRICT.

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LITTLEHAMPTON URBAN DISTRICT.

	1861.	1871.	1881.	1891.
Area in Statute Acres ..	925	925	925	925
Number of Inhabited Houses ..	497	624	743	851
„ Uninhabited „ ..	36	52	46	73
„ Building „ ..	3	4	17	15
Population	2,350	3,266	3,926	4,452
Males	1,112	1,569	1,865	1,962
Females	1,238	1,697	2,061	2,490
Persons to a House	4.73	5.23	5.28	5.23

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 107 children were registered ; of these 59 were male, and 48 were female.

Estimating the population in the middle of the year at 5,460, the birth-rate was equal to 19.6 per 1,000 persons living.

The variations in the birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	116 ..	27.7	1892 ..	81 ..	17.4
1888 ..	99 ..	23.5	1893 ..	105 ..	21.7
1889 ..	104 ..	24.4	1894 ..	98 ..	19.7
1890 ..	89 ..	20.7	1895 ..	110 ..	21.3
1891 ..	93 ..	20.8	1896 ..	107 ..	19.6

The mean annual number of births is 100, and the mean annual birth-rate is 21.9 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29.7 per 1,000 persons living, a rate 1.3 per 1,000 below the mean rate in the ten years, 1886-95.

GENERAL MORTALITY.

There were 63 deaths registered in this district during the year 1896, but to this number must be added the deaths of five persons in the East Preston Workhouse, which is outside the district, making the total of 68 deaths ; of these 41 were amongst males, and 27 amongst females.

These 68 deaths include the deaths of six visitors.

Estimating the population in the middle of the year at 5,460, the death-rate was equal to 12·4 per 1,000 persons living.

In country places throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The mean annual number of deaths during the last ten years was 64, and the mean annual death-rate is 13·7 per 1,000 persons living.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.		Death-rate.	
	Including Visitors.	Excluding Visitors.	Including Visitors.	Excluding Visitors.
1887.....	59	51	14·1	12·2
1888.....	58	55	13·8	13·1
1889.....	65	59	15·3	13·9
1890.....	38	37	8·8	8·6
1891.....	84	79	18·8	17·7
1892.....	59	56	12·8	12·0
1893.....	57	56	11·8	11·6
1894.....	72	69	14·5	13·9
1895.....	78	69	15·1	13·4
1896.....	68	62	12·4	11·3

In each quarter of the past five years the deaths were thus registered :—

	1892.	1893.	1894.	1895.	1896.	Total.
First Quarter ..	17	20	21	19	16	93
Second Quarter ..	17	12	13	23	10	75
Third Quarter ..	10	16	13	25	32	96
Fourth Quarter ..	15	9	25	11	10	70
Total	59	57	72	78	68	334

The population has increased very rapidly since the census of 1891, and more especially during the past two years.

In 1901, it will most likely be seen that the increase during this decade is greater than at any former period.

There are now about 200 new houses which have become occupied since April, 1891, and this addition means an increase to the population of about 1,000 persons.

The mean annual mortality for the twenty years, 1876-95, is 13·87 per 1000 persons living; this is the *recorded* rate, but as the factor for correction is very nearly unity ($= \cdot 99871$) the *corrected* death-rate is 13·83.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

Year.	Births.	Deaths under one year.	Ratio to 1,000 Births.
1887 ..	116 ..	8 ..	69
1888 ..	99 ..	10 ..	101
1889 ..	104 ..	6 ..	58
1890 ..	89 ..	4 ..	45
1891 ..	93 ..	10 ..	107
1892 ..	81 ..	8 ..	99
1893 ..	105 ..	5 ..	48
1894 ..	98 ..	8 ..	81
1895 ..	110 ..	13 ..	118
1896 ..	107 ..	10 ..	93
Mean ...	100	8·2	82

The ten *infantile* deaths included three from whooping cough, one from diphtheria, one from tuberculosis, one from convulsions, one from bronchitis, one from gastritis, and one from debility; one infant was born prematurely.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

There were two deaths from zymotic diseases in the case of those which are notifiable, and six in the other class where the number of cases cannot be obtained. The zymotic mortality was at the rate of 0·91 per 1,000.

					Cases.	Deaths.	
	Small Pox	..	..	..	1	none
	Scarlatina	..	..	..	4	none
	Diphtheria	..	..	..	6	1
	Membranous Croup		..	..	none	none
Fevers.	{	Typhus	none	none
		Enteric	5	1
		Continued	none	none
		Relapsing	none	none
		Puerperal	none	none
		Cholera	none	none
	Erysipelas	..	..	..	14	none
	Total	..	..	..	30	2

In the other class the deaths were as follows:—

	Deaths.
Measles	1
Whooping Cough	5
Diarrhœa and Dysentery	none
Rheumatic Fever	none
Total ..	6

There is no Isolation Hospital in this district.

The Infectious Disease (Notification) Act, 1889, came into operation on March 25th, 1890.

The Infectious Disease (Prevention) Act, 1890, came into operation on March 25th, 1891.

The Public Health Acts Amendment Act, 1890, came into operation on March 25th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table:—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Small Pox	1	—	—	—	1
Scarlatina	—	—	1	3	4
Diphtheria	1	1	4	—	6
Membranous Croup	—	—	—	—	—
Enteric Fever	—	2	—	3	5
Erysipelas	4	3	6	1	14
Total ..	6	6	11	7	30

SMALL POX.—One case of small pox occurred in March in a common lodging house in East Street. Mrs. Knight, the landlady of the “Spread Eagle,” was taken ill on March 18th, the rash appeared on the 20th, and I received the notification of the case on March 24th.

The house was occupied by Mr. and Mrs. Knight and three young children; there were also eighteen lodgers there on the night of March 23rd. Mr. and Mrs. Knight, and two of their children, six years and four years old respectively, had all been vaccinated in infancy; the baby, fifteen months old, had never been vaccinated, but it was successfully revaccinated on March 24th, on which day Mr. Knight and the two elder children were revaccinated. Twelve lodgers were also revaccinated on March 24th. Two trained nurses came in the afternoon of the same day, and they took charge of the patient while the husband and children went into an adjacent house. The house was also closed with the permission of the owner, so that the case was well isolated.

The patient did well, and on April 28th, when she was well again, the rooms and infected articles were well fumigated and some bedding and clothing were burnt. There was no other case in Littlehampton, but one lodger, Joseph Shepherd, who left this house on March 24th, had small pox at Worthing about a fortnight afterwards. There was

also another tramp, who had some spots on his face on March 24th, but, suspecting he would be detained, he left this house at once, and he could not be traced anywhere. The expenses incurred were defrayed by the District Council, and, owing to their prompt action, a serious outbreak was prevented. The "Spread Eagle," an old house, was afterwards pulled down, and now a modern inn is being erected on the site.

There were a few isolated cases of infectious disease in the town during the year, but in no instance did the disorder spread beyond the infected house.

The town was in a very healthy state during 1896.

Table 2 shows that there have been only thirty-one deaths from notifiable diseases in the twenty-one years, 1876-96. In this long period there were only three deaths registered as due to enteric fever; and there has been only one death from scarlatina since 1878.

The mean annual death-rate from notifiable diseases is equal to 0·36 per 1,000, and the mean annual rate of mortality from non-notifiable disorders, such as measles, whooping cough, diarrhœa, and rheumatic fever, is equal to 0·79 per 1,000 persons living. These rates are much lower than in any other urban district in West Sussex.

Influenza has only caused two deaths, one in 1890 and one in 1896.

WATER SUPPLY.

A detailed account of the waterworks will be found in my annual reports for 1879, 1888, and 1890, so that it need not be here repeated.

A Local Government Board inquiry was held on the 24th of September, 1896, by Colonel C. H. Luard, R.E., on an application from the Littlehampton Urban District Council for sanction to borrow £772 for works of street improvement, and £228 for works of water supply.

DRAINAGE AND SEWAGE.

A detailed account of the system of sewerage adopted will be found in my annual report for 1888.

All the sewage flows by gravitation into the mouth of the river whence it is carried away to sea.

The sewers are well flushed, and occasionally river water is sent through, so as the more effectually to cleanse them. All new houses are well drained and ventilated in accordance with the model By-laws.

SCAVENGING AND CLEANSING.

The work is well done and the streets are kept very clean and well watered. The health of the town, as usual, was in a very satisfactory condition during the year.

SLAUGHTER HOUSES, BAKEHOUSES, AND COWSHEDS.

The number of Slaughter Houses, Bakehouses, and Cowsheds remains the same, and they are periodically inspected and found generally in a well kept state. The town water is laid on to all these premises.

CASES OF OVERCROWDING.

There were no cases of overcrowding abated during the year.

PROCEEDINGS BEFORE THE MAGISTRATES.

No Proceedings were taken before the Magistrates during the year.

INQUESTS.

Inquests were held in seven cases :—Male, 61 years, suicide by drowning ; male, 28 years, suicide by hanging ; male, 27 years, accidentally drowned in the River Arun ; female, 50 years, syncope ; male, 33 years, accidentally drowned while bathing in the sea ; male, 52 years, syncope ; male, 39 years, suicide by shooting with a revolver

There were no deaths returned as “ not certified ” during the year 1896.

LITTLEHAMPTON URBAN DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1886-95, and in 1896.

Year.	At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1886-90 ...	270	38	25	11	17	78	101
1891-95 ...	350	45	34	19	16	108	128
Per 1,000 ...	1,000	134	95	48	53	300	370
1896 ...	68	10	9	4	1	27	17

LITTLEHAMPTON URBAN DISTRICT.

TABLE 2.—Showing the Deaths from various causes, in the twenty years, 1876-95, and in 1896.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers,					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1876-80 ...	—	7	3	—	—	—	—	—	1	—	1	2	1	5	1	—	21
1881-85 ...	—	—	1	—	—	1	3	—	—	—	2	4	4	4	—	—	19
1886-90 ...	1	—	1	—	—	—	—	—	—	—	1	4	8	7	1	1	24
1891-95 ...	—	1	4	—	—	1	—	—	—	—	1	6	8	5	2	—	28
1896 ...	—	—	1	—	—	1	—	—	—	—	—	1	5	—	—	1	9
Total ...	1	8	10	—	—	3	3	—	1	—	5	17	26	21	4	2	101

LITTLEHAMPTON URBAN DISTRICT.

TABLE 3 —Showing the Deaths and Death-rate from all causes and from various causes in the twenty years, 1876-95, and in 1896.

PERIOD.	Deaths during the twenty-one years 1876-96 from					Mean Annual Death-rate per 100,000 living from					
	Population in middle of Period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
Including Visitors.	1876-80	261	21	36	34	18	1,416	114	195	184	96
	1881-85	278	19	26	40	27	1,391	94	130	200	135
	1886-90	270	23	29	47	27	1,282	110	137	224	128
	1891-95	350	28	27	45	36	1,460	116	113	189	152
	1896	68	8	6	9	5	1,245	146	110	165	91
Excluding Visitors.	1876-80	248	20	32	33	17	1,346	109	174	178	91
	1881-85	262	16	25	39	25	1,311	79	125	195	125
	1886-90	250	18	28	46	23	1,187	86	132	219	109
	1891-95	329	26	23	41	33	1,372	108	97	171	139
	1896	62	8	5	9	5	1,135	146	91	165	91

(A)—Table of DEATHS during the Year 1896, in the LITTLEHAMPTON

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox. (i)	Scarlatina.	Diphtheria.
Littlehampton Urban District	63	10	9	4	1	27	12	Under 5 5 upwards.			1
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	63	10	9	4	1	27	12	Under 5 5 upwards.			1
The subjoined numbers have also to be taken into											
Deaths occurring outside the District among persons belonging thereto.....	5	—	—	—	—	—	5	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...	6	1	—	—	—	1	4	Under 5 5 upwards.			

URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

																	5	5
																	1	1
												1		2		2		5

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF SICKNESS,
 Reported to the Officer of Health, during the year 1896, in the LITTLEHAMPTON DISTRICT.

Names of Localities adopted for the purpose of these Statistics ; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS COMING TO THE KNOWLEDGE OF THE OFFICER OF HEALTH.					
	Census 1891.	Esti- mated mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.	
									Typhus.	Enteric.
(a)	(b)	(c)	(d)	(e)						
Littlehampton Urban District	4,452	5,460	107	Under 5 5 upwards.	..... 1	2 2	1 5	..... ..... .....	..... ..... .....	..... ..... 5
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
				Under 5 5 upwards.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
TOTALS	4,452	5,460	107	Under 5 5 upwards.	..... 1	2 2	1 5	..... ..... .....	..... ..... .....	..... ..... 5

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
Urban District; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

ARUNDEL URBAN DISTRICT.

pp. 211 et seq.

ARUNDEL URBAN DISTRICT.

				1861.	1871.	1881.	1891.
Area in Statute Acres	..			1,969	1,969	1,969	1,969
Number of Inhabited Houses	..			528	546	552	550
„ Uninhabited	„	..		23	14	5	20
„ Building	„	..		—	1	1	1
Population	..	..	..	2,498	2,956	2,748	2,644
Males	..	..	..	1,201	1,466	1,357	1,327
Females	..	..	..	1,297	1,490	1,391	1,317
Persons to a House	..	..		4.73	5.31	4.98	4.80

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 77 children were registered ; of these 40 were male, and 37 were female.

Estimating the population in the middle of the year at 2,640, the birth-rate was equal to 29.2 per 1,000 persons living.

The variations in the birth-rate during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	64 ..	23.2	1892 ..	69 ..	26.1
1888 ..	76 ..	28.1	1893 ..	78 ..	29.5
1889 ..	62 ..	23.0	1894 ..	76 ..	28.8
1890 ..	79 ..	29.2	1895 ..	76 ..	28.8
1891 ..	59 ..	22.3	1896 ..	77 ..	29.2

The mean annual number of births is 71, and the mean annual birth-rate is 26.8 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate of 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

In each quarter of the past five years the births were thus registered :—

	1892.	1893.	1894.	1895.	1896.	Total.
First Quarter ..	16	24	22	15	24	101
Second Quarter ..	20	18	21	22	12	93
Third Quarter ..	15	18	18	22	21	94
Fourth Quarter ..	18	18	15	17	20	88
	—	—	—	—	—	—
Total	69	78	76	76	77	376

GENERAL MORTALITY.

There were 31 deaths registered in this district during the year 1896, but to this number must be added the death of one person in the East Preston Workhouse, which is outside the district, so that the total number of deaths amounts to 32; of these 14 were male, and 18 were females.

Estimating the population in the middle of the year at 2,640, the death-rate was equal to 12·1 per 1,000 persons living.

In country places throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	77	28·0	1892 ..	45	17·0
1888 ..	56	20·7	1893 ..	46	17·4
1889 ..	47	17·4	1894 ..	32	12·1
1890 ..	70	25·9	1895 ..	32	12·1
1891 ..	51	19·3	1896 ..	32	12·1

Thus there have been during the above period 488 deaths, and a mean annual mortality of 18·2 per 1,000 of population. During the same period there were 716 births, so that the natural increase of population by excess of births over deaths was 228.

Since the factor for correction for this district is ·92133, the *recorded* death-rate of 18·20 becomes the *corrected* death-rate of 16·77 per 1,000.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

Year.		Births.		Deaths under one year.		Ratio to 1,000 Births.
1887	..	64	..	8	..	125
1888	..	76	..	1	..	13
1889	..	62	..	9	..	145
1890	..	79	..	18	..	228
1891	..	59	..	11	..	186
1892	..	69	..	4	..	58
1893	.	78	..	9	..	115
1894	..	76	..	6	..	79
1895	..	76	..	3	..	39
1896	..	77	..	8	..	104
Mean	...	72		7.7		109

The eight *infantile* deaths included one from whooping cough, one from diarrhoea, one from convulsions, one from gastritis, three from debility, and one from atrophy.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

There were three deaths from zymotic diseases in the case of those which are notifiable, and two in the other class where the number of cases cannot be obtained. The zymotic mortality was at the rate of 1.89 per 1,000.

				Cases.	Deaths.
	Small Pox	..	..	none	none
	Scarlatina	..	..	3	none
	Diphtheria	..	..	15	2
	Membranous Croup	..	..	none	none
Fever.	Typhus	..	..	none	none
	Enteric	..	..	3	1
	Continued	..	..	none	none
	Relapsing	..	..	none	none
	Puerperal	..	..	none	none
	Cholera	..	..	none	none
	Erysipelas	..	..	1	none
	Total	..	..	22	3

In the other class the deaths were as follows:—

	Deaths.
Measles	none
Whooping Cough	1
Diarrhœa and Dysentery	1
Rheumatic Fever	none
Total ..	2

There is no Isolation Hospital in this district.

The Infectious Disease (Notification) Act, 1889, came into operation on May 13th, 1891.

The Infectious Disease (Prevention) Act, 1890, came into operation on March 16th, 1891.

The Public Health Acts Amendment Act, 1890, came into operation on March 16th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Scarlatina	—	1	2	—	3
Diphtheria	—	—	13	2	15
Membranous Croup	—	—	—	—	—
Enteric Fever	—	1	—	2	3
Erysipelas	—	—	—	1	1
Total ..	—	2	15	5	22

There were five cases notified in 1891 ; 7 in 1892 ; 52 in 1893 ; 16 in 1894 ; and 4 in 1895.

DIPHTHERIA. —There were fifteen cases of diphtheria notified during the year and they all occurred at a time when the house connections were being made with the new sewer. Between the house and the sewer, an intercepting trap was placed, and as the water had not then been laid on in all cases, there was much insufficient flushing of the closets, and therefore these traps became very foul, and great complaints were made of the offensive smells given off. On the house side of the trap a vertical pipe was brought up to the pavement level, and whenever the traps were foul the nuisance was very marked. There was also at that time insufficient ventilation of the house drains at the highest point, and so any impure air that was present came up through the pipes at the pavement level. There was ample fall, and a remedy was soon found when sufficient water-supply and ventilation were provided. With this object a notice to each householder was sent out by the Sanitary Authority in the following terms :—

The Sanitary Authority, being satisfied that the closet or closets belonging to your premises are not in a sanitary condition, and therefore injurious to health, owing to such closet or closets not

being furnished with a sufficient water supply and flushing apparatus, and the closet drain not having proper ventilation, do hereby require you, within ten days from the service of this notice, to make the said premises in a sanitary condition, and for that purpose to construct a separate cistern or flushing box of adequate capacity, which shall be so constructed, fitted, and placed as to admit of the supply of water for use in such closet or closets without any direct connection between any service pipe upon the premises and any part of the apparatus of the closet or closets other than such cistern or flushing box; and to provide and properly construct a ventilating shaft at the upper end of the drain to such closet or closets, and furnish such closet or closets with a pan, basin, or other suitable receptacle of non-absorbent material, and of such shape, and of such capacity, and of such mode of construction as to receive and contain a sufficient quantity of water, and to allow all filth which may from time to time be deposited in such pan, basin, or receptacle to fall free of the sides thereof and directly into the water received and contained in such pan, basin, or receptacle."

The cases occurred in different parts of the town, and there was nothing in common to them all, except the above named defects, and the outbreak ceased when the defects were removed. There was no evidence that the water supply or the milk supply had anything to do with the attacks; nor did school attendance appear to have any effect.

The disease was chiefly amongst children, but at the end of September and during October, four adults were attacked.

			Children.			Adult.		
			M.	F.	Total.	M.	F.	Total.
July	..	..	1	—	1	—	—	—
August	..	..	3	2	5	—	—	—
September	..	..	3	2	5	1	1	2
October	..	..	—	—	—	—	2	2
Total..			7	4	11	1	3	4

The ages of those attacked were :—

Under three years	..	..	..	..	none
Three years to ten years	..	..	..	..	8
Ten years to fifteen years	..	..	..	..	3
Fifteen years and over	..	..	..	..	4

The two children that died were four years old respectively.

WATER SUPPLY.

An excellent supply of good water has now been given to the town free of cost by the Duke of Norfolk. The amount is limited to 75,000 gallons a day. The houses on each side of the river can now be supplied, and the water mains are extended to Crossbush and Tortington,

SEWERAGE AND DRAINAGE

The main system of sewerage, which was described in my Annual Report for 1894, was carried out in the past year, and it was completed in the autumn of 1896.

At present it works in a very satisfactory manner, and the sewage, after being subject to the action of lime and other chemicals, flows into the tidal River Arun.

The sludge produced is afterwards pressed, and sold or given away, but at present there is not much demand for it.

The system has been on trial for too short a time for any fair estimate to be made of the working expenses.

BAKEHOUSES.

These are six in number, and they are very well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no instance is there any drain within the building.

SLAUGHTER HOUSES.

These are five in number, and they are very well kept as regards cleanliness and removal of refuse. One old one has been pulled down and a new one has been erected on another site in a more isolated position. The meat in all cases has seemed to be of very good quality.

COMMON LODGING HOUSES.

These are three in number, but the number of inmates is very small. The houses are very well kept.

PROCEEDINGS BEFORE THE MAGISTRATES.

No legal proceedings were taken during the year.

INQUESTS.

There was no inquest held during the year 1896.

There were no deaths returned as "not certified" during the year.

ARUNDEL URBAN DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1886-95, and in 1896.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1886-90	...	292	42	31	16	21	103	79
1891-95	...	206	33	10	10	7	64	82
Per 1,000	...	1,000	151	82	52	56	335	324
1896	...	32	8	3	—	—	9	12

ARUNDEL URBAN DISTRICT.

TABLE 2.—Showing the Deaths from various causes, in the fourteen years, 1883-96.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers,					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1883-85 ...	—	—	1	—	—	—	—	—	—	—	—	1	1	3	—	—	6
1886-90 ...	—	16	7	—	—	11	1	—	1	—	1	1	1	3	1	2	45
1891-95 ...	—	2	—	—	—	2	—	—	—	—	—	1	1	3	—	11	20
1896 ...	—	—	2	—	—	1	—	—	—	—	—	—	1	1	—	—	5
Total ...	—	18	10	—	—	14	1	—	1	—	1	3	4	10	1	13	76

ARUNDEL URBAN DISTRICT.

TABLE 3 — Showing the Deaths and Death-rate from all causes and from various causes in the fourteen years, 1883-96.

PERIOD.	Deaths during the years 1883-96, from							Mean Annual Death-rate per 100,000 living, from								
	Population in middle of Period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
1883-85	..	122	6	22	20	13	1,478	72	267	242	157	233	303	113	151	76
1886-90	..	292	43	32	37	32	2,147	312	232	269	233	250	303	99	250	76
1891-95	..	206	9	13	33	40	1,560	68	99	250	303	250	303	99	250	76
1896	..	32	5	3	4	2	1,212	189	113	151	76	151	76	113	151	76

(A)—Table of DEATHS during the Year 1896, in the ARUNDEL

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)		Small Pox. (j)	Scarlatina. (k)	Diphtheria. (l)
Arundel Urban District ...	31	8	3	—	—	8	12	Under 5 5 upwards.			2
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	31	8	3	—	—	8	12	Under 5 5 upwards.			2
The subjoined numbers have also to be taken into											
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	1	—	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...								Under 5 5 upwards.			

URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES
 Officer of Health, during the year 1896, in the ARUNDEL

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK- COMING TO THE KNOWLEDGE OF					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS. Typhus. Enteric.	
(a)	(b)	(c)	(d)	(e)						
Arundel Urban District ...	2,644	2,640	77	Under 5 5 upwards.		1 2	5 10			3
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	2,644	2,640	77	Under 5 5 upwards.		1 2	5 10			3

OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical
Urban District; classified according to DISEASES, AGES, and LOCALITIES.

DEATHS IN EACH LOCALITY, OF THE MEDICAL OFFICER HEALTH.							NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.												
7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
FEVERS.				Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.						Erysipelas.		
Continued.	Relapsing.	Puerperal.	Cholera.								Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.	Cholera.			
				1															

HORSHAM URBAN DISTRICT.

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HORSHAM URBAN DISTRICT.

						1881.	1891
Area in Statute Acres	833	839
Number of Inhabited Houses	1,396	1,657
„ Uninhabited	„	..	..	..	..	113	156
„ Building	„	..	..	..	..	12	18
Population	..	..	..	..	..	6,874	8,087
Males	..	..	..	..	..	3,223	3,796
Females	..	..	..	..	..	3,651	4,291
Persons to a House	..	..	..	..	..	4·94	4·88

BIRTHS AND BIRTH-RATE.

During the year 1896, the births of 215 children were registered ; of these 101 were male, and 114 were female.

Estimating the population in the middle of the year at 8,675, the birth-rate was equal to an annual rate of 24·8 per 1,000 persons living.

The births and birth-rate in the district during the past ten years are here shown :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1887 ..	201 ..	26·4	1892 ..	211 ..	25·7
1888 ..	220 ..	28·5	1893 ..	220 ..	26·3
1889 ..	236 ..	30·1	1894 ..	229 ..	27·1
1890 ..	227 ..	28·5	1895 ..	221 ..	25·8
1891 ..	232 ..	28·6	1896 ..	215 ..	24·8

The mean annual number of births is 221, and the mean annual birth-rate is 27·2 per 1,000 persons living.

In England and Wales the birth-rate during the year was 29·7 per 1,000 persons living, a rate of 1·3 per 1,000 below the mean rate in the ten years, 1886-95.

In each quarter of the past five years the births were thus registered :—

	1892.	1893.	1894.	1895.	1896.	Total.
First Quarter ..	51	60	67	59	53	290
Second Quarter ..	53	68	58	55	54	288
Third Quarter ..	53	51	54	49	61	268
Fourth Quarter ..	54	41	50	58	47	250
<hr/>						
Total	211	220	229	221	215	1096

GENERAL MORTALITY.

There were 115 deaths registered in this district during the year 1896, but to this number must be added the deaths of eleven persons in Horsham Workhouse, which is outside the urban area, leaving the corrected total at 126.

Estimating the population at 8,675, the death-rate was equal to an annual rate of 14·5 per 1,000.

In country places throughout England and Wales the rate of mortality in 1896 was equal to 15·3 per 1,000.

In each quarter of the past five years the deaths were thus recorded :—

	1892.	1893.	1894.	1895.	1896.	Total.
First Quarter ..	78	37	31	45	35	226
Second Quarter ..	33	43	27	33	22	158
Third Quarter ..	22	40	29	30	30	151
Fourth Quarter ..	30	41	25	39	39	174
<hr/>						
Total ...	163	161	112	147	126	709

The deaths and death-rate in the past ten years are here shown :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1887 ..	110	14·5	1892 ..	163	19·7
1888 ..	106	13·7	1893 ..	161	19·3
1889 ..	106	13·5	1894 ..	112	13·2
1890 ..	131	16·4	1895 ..	147	17·1
1891 ..	163	20·1	1896 ..	126	14·5

The mean annual number of deaths is 132, and the mean annual death-rate is equal to 16·2 per 1,000 persons living.

Since the factor for correction for this district is ·94223, the *recorded* death-rate of 16·20 per 1,000 becomes the *corrected* death-rate of 15·26 per 1,000.

INFANT MORTALITY.

There were 17 deaths of infants under one year of age, and as there were 215 births, the rate of infant mortality was equal to 79 per 1,000, a figure which is low for a district of this kind, the rate for the whole of the combined district being 98 in the past year.

In 1892 the ratio was 123, in 1893 it was 136, in 1824 it was 118, and in 1895 it was 109 per 1,000 registered births.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 148.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were four in the case of those which are notifiable, and seven in the other class where the number of cases cannot be obtained. The zymotic mortality was at the rate of 1.27 per 1,000.

					Cases.	Deaths.
	Small Pox	..	..	..	none	none
	Scarlatina	..	..	..	7	none
	Diphtheria	..	..	..	7	2
	Membranous Croup		..	..	none	none
Fever.	Typhus	..	..	..	none	none
	Enteric	..	..	..	4	1
	Continued	..	..	..	none	none
	Relapsing	..	..	..	none	none
	Puerperal	..	..	..	none	none
	Cholera	..	..	..	none	none
	Erysipelas	..	..	..	none	1
	Total	..	..	..	18	4

In the other class the deaths were as follows:—

					Deaths.
	Measles	..	..	..	3
	Whooping Cough	..	..	..	2
	Diarrhoea and Dysentery	..	..	..	2
	Rheumatic Fever	..	..	..	none
	Total	..	..	..	7

At a meeting of the Urban District Council of Horsham, held on May 29th, 1896, it was resolved:—

That the Infectious Disease (Notification) Act, 1889, and the Infectious Disease (Prevention) Act, 1890, be adopted by the Horsham Urban District Council, and that the provisions of the said Acts come into operation in the Urban Sanitary District of Horsham on the 8th day of July, 1896.

These Acts are now, therefore, adopted throughout the whole of the combined district of West Sussex.

In the last half-year of 1896 there were eighteen notifications :—

	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total
Small Pox			—	—	—
Scarlatina			5	2	7
Diphtheria			4	3	7
Membranous Croup		Act not	—	—	—
Enteric Fever ..		in force.	3	1	4
Puerperal Fever ..			—	—	—
Erysipelas			—	—	—
			—	—	—
Total			12	6	18

SMALL POX.—A small outbreak of small pox occurred in May and June at a time when there were several other cases of this disease among tramps in different parts of the country. The weather at this time was fine and warm so that many persons of this wandering class slept at night in the open air and their movements could not be readily traced.

1. John Smallwood, 36 years old, a labourer, had been lodging at the “Talbot,” up to May 18th, when he left for another smaller lodging-house in East Street, but he did not sleep here regularly. Falling ill, he was admitted into the Horsham Workhouse on May 28th, and after his arrival there he was found to be suffering from small pox. The Workhouse is in the rural district and $1\frac{1}{2}$ mile distant from the centre of the town. The case was at once isolated and none of the inmates suffered from the disease.

2. Joseph Pullinger, 49 years old, a labourer, slept in the same room at the “Talbot,” as Smallwood did up to May 18th, and he remained at that common lodging house until the morning of May 30th; he then left and his movements were not traceable for some days. Search was made for him as he was known to be poorly when he left. I found him at 2 p.m., on June 3rd, walking in West Street, with a well marked rash over his forehead, hands, and face. He walked to the Hospital where he remained until he recovered; he had been sleeping in the open air the previous four nights.

Whitsun Monday fell on May 25th, 1896. On this Bank Holiday numbers of people go up to Star Row, a hamlet one mile north of the town, and on this occasion Smallwood, Pullinger, Stone, and Lipscombe were there mixing freely with others. This date is too near the time when the first four cases were attacked to lead one to believe that this meeting had anything to do with the outbreak.

3. William Stone, 35 years old, a labourer, had been working on the new railway at Redhill up to May 16th, when he came to Haven Lane, Horsham. He went to work at Stammerham on May 26th, and remained at work until June 2nd, although he felt “queer” on May 31st. The rash of small pox appeared on June 3rd. He never went to the “Talbot,” but he lodged in a private house in Haven Lane occupied

by his parents. Stone was removed in an ambulance to the Hospital at 9.30 p.m. on June 3rd, and no other person in this house or in the neighbourhood was attacked.

This man had been vaccinated in infancy, and there were four good marks on the right arm. He enlisted at the end of 1884, and he was revaccinated early in 1885, and this left three good marks on the left arm. He is now in the Army Reserve.

4. William Lipscombe, 44 years old, now a labourer in irregular work, slept at the "Talbot" in a room by himself, but he mixed freely with the inmates during the day; he was taken ill on June 4th, and he was removed to the Hospital, at 8 p.m., on June 5th. He joined the Army in 1870, and he was invalided home from India; he had been vaccinated successfully as an infant, and again in 1871 after enlistment.

5. Mrs. Rowland, 36 years old, was poorly on June 8th, and she had the small pox rash out on June 9th, on which day, at 4.30 p.m., she was removed to the Hospital in an ambulance. She lived with her husband and four young children in Queen Street, Horsham, but she was frequently at the "Talbot," and helped there in the housework. Mr. Rowland, who kept the "Talbot," was her father-in-law. She had been vaccinated in infancy successfully, and so had the rest of the family. No other person was attacked, and the outbreak now ceased.

The "Talbot" is a very old inn in Market Square, Horsham, and a portion of it has been used for a good many years as a common lodging-house. There are frequently from eighteen to twenty lodgers there each night, and a few seem to stay for weeks at a time, but most of the inmates wander on from place to place. They are most numerous when fairs or races are about to be held, and it is also a resort for Italian organ-grinders in the season; in the first week of June, twenty-seven "organs" went through.

I reported on this house to the Council in January, 1895, with the view of closing it, but the owner made some alterations, and it was removed from the register. In 1893, there was a serious outbreak of small pox at Horsham, and several cases occurred among tramps frequenting this house.

On June 3rd, a special meeting of the Horsham Rural District Council met to consider the question of providing means for dealing with any cases of small pox that might arise.

This Rural District Council owned three hospital marquees which had been of much service in 1893, and they now agreed to lend these to the Urban District Council in case of an outbreak. The Urban District Council had just purchased the Stanford estate of 190 acres at Bredbridge for the purpose of a sewage farm, so that there was ample

room to erect a temporary hospital. On this farm there are several buildings and amongst them are two old cottages, semi-detached, in a fair state of repair. It was at once determined to adapt these cottages for receiving patients in the upper rooms and to use the lower rooms for administration purposes. It was also agreed to erect the tents on some land immediately adjoining the pair of cottages; the three hospital tents were sent up from the Workhouse soon after midday on June 3rd, and one tent had been erected by the evening and two more were put up the next morning.

Pullinger was the first patient admitted to the cottage in the afternoon of June 3rd. Stone came in on the evening of the 3rd, while Smallwood was brought from the Workhouse early on June 4th. Lipscombe came in on June 5th, and Mrs. Rowland was admitted on June 9th.

All the cases were of moderate severity. All had been vaccinated successfully in infancy, two had been revaccinated, and all recovered.

Two trained nurses came down from London on the afternoon of June 3rd and took charge of the patients. A man was employed to carry messages to and fro and to obtain provisions from the town.

The other measures of precautions taken consisted in the fumigation of any infected room with burning sulphur directly the patient was removed, the burning of any bedding or clothing used by the patient, the closure of the "Talbot" by fastening up the doors, and by revaccinating any who would consent to this being done, but few availed themselves of the offer among those who frequented the lodging house.

The isolation of the patients and the stamping out of the epidemic were much facilitated by the prompt action of the Urban District Council.

The cost of maintenance, nursing, &c., for these five patients amounted to a little over £125, of which sum £20 was repaid by the Rural District Council for the charges of one patient who came from Haven Lane, in the Rural District. No charge was made for the tents.

There was also one other case in the town of an adult male who recovered; the case was well-known to exist, but no particulars were obtainable.

MEASLES was very prevalent in the winter of 1895 and in the spring of 1896. The following table shows that nine schools under the School Board were all closed at various periods between September, 1895, and April, 1896.

School.	Numbers on the books			Average. Attendance.	Absent.	Date of Closure.	Date of re-opening.
	Boys.	Girls.	Infants.				
Broadbridge Heath, mixed ..	21	26	27	59	59	Sept. 30, 1895.	Nov. 4, 1895.
Trafalgar Road, Infants ..	—	—	120	95	55	Nov. 20, „	Jan. 6, 1896.
Trafalgar Road, mixed ..	131	118	—	208	102	Nov. 21, „	Jan 6, „
St. Mark's, Infants	—	—	158	122	95	Nov. 27, „	Jan. 6, „
East Parade, Boys	214	—	—	184	29	Dec. 4, „	Jan. 6, „
East Parade, Girls	—	203	—	172	30	Dec. 4, „	Jan. 6, „
East Parade, Infants	—	—	160	121	70	Dec. 4, „	Jan. 6, „
Denne Road Boys	155	—	—	125	34	Dec. 4, „	Jan 6, „
All Saints, mixed	75	68	97	205	98	March 25, 1896.	April 20, „
<hr/>							
Total ..	596	415	562	1,291	572		

The numbers attacked cannot be given; the numbers absent represent those who were kept away from school at the date of closure, but many others had measles after the closure. There were 1,573 children on the books, 1,291 in average attendance and 572 were absent. Out of 562 infants, as many as 286 were absent; out of the 1,001 boys and girls, other than infants, 286 were also absent; the absentees were twice as numerous among the infants as amongst the other children; and amongst boys and girls the chief absentees were in the lower standards. During the half year, September, 1895, to April, 1896, when the disease was prevalent there were twelve deaths, three boys and nine girls; 3 died under one year, 4 from one to two years, 4 from two to five years, and 1 from five to ten years of age. Seven of the twelve deaths were amongst infants who were too young to attend school.

HORSHAM COTTAGE HOSPITAL.

This useful and excellent Institution was erected by public subscriptions and donations at a total cost of £2,089 12s. 5d. It is situated in Hurst Road, and the buildings were opened in June, 1892; the first patient was admitted on July 13th, 1892.

The Hospital started free from debt, the site having been given by Mr. Hurst, and each succeeding year the receipts have exceeded the expenditure, and £210 13s. 6d. of the balances have been invested as a reserve fund, leaving £53 17s. 8d. in hand.

Each patient pays a weekly contribution of not less than 2s. 6d. or more than 10s. 6d., but such payments may be remitted at the discretion of the Committee. The fees from this source amounted to £233 2s. 8d. during the past five and a half years.

The main sources of income are derived from subscriptions and donations, from offertories and collections, and to a small, but increasing, extent, from interest on investments.

Patients are admitted not only from the town of Horsham, but from the neighbouring parishes.

Besides the reserve fund of £210 13s. 6d., there is also an endowment fund of £611 11s. 5d.; the interest from the investments in each fund is carried to the income account each year.

The mean cost of each patient is £5 18s., and as there are eight beds, the mean annual cost of a bed is £47 4s.

Year.	Receipts.			Expenditure.			Balance.			In-Patients.			
	£	s.	d.	£	s.	d.	£	s.	d.	Hor- sham.	Other parishes.	Total.	Deaths.
1892	283	18	1	134	4	11	149	13	2	14	12	26	None
1893	401	0	5	330	16	6	70	3	11	26	34	60	2
1894	386	17	0	365	11	9	21	5	3	34	29	63	4
1895	429	10	5	412	4	9	17	5	8	40	25	65	3
1896	396	0	4	389	17	2	6	3	2	38	24	62	3
Total	1,897	6	3	1,632	15	1	264	11	2	152	124	276	12

WATER SUPPLY.

A description of the old well and of the new supply and boring is given in my Annual Report for 1892; the strata bored through and the chemical analysis of the water are given in the Annual Report for 1893, so that these descriptions are not repeated here.

The water from the well is pumped up to a covered reservoir, to the north-east of the town, and situated just above the Horsham Workhouse in Star Row.

About ninety houses in Star Row were supplied with the town water up to the end of the year; the Union Workhouse is also supplied from this source. This Star Row area is in the rural district, and several new houses are being erected here. It is important that arrangements should be made at once, whereby all the houses in this rural area should be supplied on equitable terms from the Horsham Waterworks.

A Local Government Board Inquiry has been held, at which the questions of cleaning out and lining the Waterworks headings and other works in connection with improving the water supply were fully discussed.

The sanction of the Board for the carrying out of the proposed works has not yet been received.

On October 8th last, the headings were pumped out for the purpose of inspection, and much difficulty was experienced in emptying them. There is no doubt that the quantity of water yielded by the new bore-hole has become much greater, and the following particulars by Mr. Renwick, the Town Surveyor, give confirmation to this statement:—

During the past summer months, before the commencement of the day's pumping, the minimum depth of water in the well has been 24ft. 6in., measured from the heading floors, as against 21ft. in the same season of 1895, and at the close of a day's work the water has not been lowered below a depth of 6ft., while during the summer of 1895 it was frequently pumped down to 4ft., or 2ft., below the roofs of the headings.

The maximum depth of water in the well, during the past three winters, has been the same, namely, 28ft ; thus the range of the depth of water between the summer and the winter months has varied to the extent of only 3ft. 6in. in 1896, as against 7ft. in 1895.

That the yield of the borehole should increase as time passed is in accordance with the views of Mr. Hodson, the Engineer, who held that the action of the pumps would clear the fissures in the water-bearing strata of the finely divided clay that was deposited in them.

A systematic house to house inspection of the water fittings is being made, full particulars of which will be given next year ; but already the effect has been to reduce the daily quantity of water pumped by upwards of 36,000 gallons.

Many leaky services have been detected by means of the water telephone, and which, without its aid, would not have been suspected. "Dead ends" in the water mains are, wherever possible, being done away with; all new mains are laid much deeper than formerly ; and valves of a standard make are being used.

SEWERAGE AND DRAINAGE.

Previous to the year 1875, the sewage from the town of Horsham with a population estimated at that time to amount to 6,500, flowed into the River Arun at various points in its course through the town. The Local Board District of Horsham was formed in 1875, and one of its first objects was to provide a new and sufficient scheme of sewerage for the town and to prevent the pollution of the river. Such a

scheme was carried out, and some land was purchased at a spot outside the town area, to the west of, and one mile distant from, the centre of Horsham. To this spot, partly surrounded by the river Arun, the sewage was conveyed by a main sewer and it was treated by irrigation over the land. Shortly before this main sewer reached the farm a long syphon was introduced in its course in consequence of the conformation of the surface of the ground; there was no opening at each end of this syphon by which it could be examined frequently and kept clean, and hence it proved to be more or less an obstruction, and much sewage accumulated within it. Only about three acres of the land could be utilised as a farm, as the rest was too high to enable the surface to be covered by gravitation alone.

The river, too, varied very much in volume; there was an abundant flow in wet weather, but in dry seasons it was a small, sluggish stream. The volume was augmented a short distance below the sewage farm by a branch which came down from Warnham, the junction being formed at a spot one third of a mile above Flood-gates.

At Flood-gates, the course of the stream is diverted and most of the water flows along a channel to Broadbridge Mill, where it was used as a motor power, and afterwards it rejoins the river at a lower point.

If no flood-gates existed, the sewage from the farm in a more or less purified state would have passed directly down the stream, becoming more and more diluted in its course, but owing to this diversion at the flood-gates the stream was blocked at this spot, much filthy black mud was deposited there, and time was given for the sewage to putrefy and to cause a great nuisance at Broadbridge Mill. The nuisance was intensified at the Mill, because a large mill-pond had been formed here which was well stocked with fish. In the year 1880, at the end of the summer the nuisance was very great; the mill stream was black and offensive and numbers of fish were killed in the river and in the pond. It was caused:—

1. By the effluent at the Horsham sewage farm not being sufficiently purified before entering the stream.

2. By several old sewers in the town which at that time conveyed sewage direct into the river.

- 3 By sewage flowing at times directly from the sewage farm into the stream. Steps were taken by the Local Board to remedy these evils, but they were chiefly abated by a heavy fall of rain which occurred in September, 1880, and the river becoming full of water, much of the deposit was washed away, the water became less foul, and the fish ceased to die. This was always the case in wet seasons, but in dry weather the nuisance was sure to recur.

It was eventually decided to carry the effluent sewage from the farm to a point below flood-gates, and large areas or beds were prepared, whereby some of the suspended matters could be deposited, and the clarified portion could flow into the river; this was done by

September, 1882. This scheme effectually stopped the complaints from Broadbridge Mill, but the river was so much diminished in volume by the diversion to the mill, that below flood-gates, in dry weather, the bed of the river was nearly dry. Hence the sewage became, in dry seasons, a nuisance at a different spot, as it decomposed after joining the river. If the flood-gates had been under the control of the Local Board, the bed of the river could have been scoured at intervals, and foul deposits would not have accumulated and become so offensive. But the flood-gates and the mill, and also much land adjacent belonged to the same owner. In the meantime litigation had commenced, and it continued for many years.

In 1883, legal proceedings ceased, and the Local Board compensated the owner of Broadbridge Mill for the damage, &c., done to his property. In 1884, there was no perceptible nuisance in the River Arun from the sewage farm up to flood-gates, and indeed, at this time, the irrigation process was rarely, if at all, used, and the effluent sewage passed into the river a short distance below flood-gates; this portion of the river was in that dry summer very much polluted for a mile in its course, until Mill Bridge was reached where the mill stream here rejoins the river and much increases its volume. Three miles below the outfall, at Dedisham Farm, the flow of the river was so much increased that no pollution was apparent to the eye.

On August 25th, 1891, an inquiry was held for sanction to borrow £4,600 for works of sewage disposal, and during 1892 much progress was made in carrying out a scheme which is described in my annual report for 1892. The main features of this scheme were the treatment of the sewage by means of chemicals, such as lime and ferric aluminate, allowing the sludge so precipitated to settle in large tanks, then passing the sewage through filter beds of sand and polarite after some suspended matters had been removed by a coke filter. The sludge was collected, pressed, and stored for use on land. The clear effluent was allowed to flow into the river after passing over a small strip of land. This process is known as the International. So much confidence had the engineer in the system that the works were erected on the original sewage farm, the old subsidence beds were disused and the effluent passed into the river again above the flood-gates. Then there began a fresh series of trouble and the system proved a complete failure, as carried out at Horsham. The filter beds were found on examination to be very badly constructed, and it was also quite possible to run the sewage direct into the river without passing the filter beds first. The effluent, though clear at first, soon began to putrefy, and in the course of time the river became as bad as it was before. When such an effluent passes at once from the outfall works into a tidal river, or into a vast volume of water, the result is favourable; but when it passes into a small sluggish stream, it does not become sufficiently diluted and putrefactive changes are set up and a great nuisance is caused. In October, 1893, the river Arun was in a most foul condition, and when the flood-gates were partly open, a rush of black, offensive water rushed down, killing the fish in its progress. On October 5th, 1893, one-third of an inch of rain fell rapidly during a storm; the pressure of the water in the sewer expelled the semi-solid contents of the above mentioned syphon and the filter beds at the works were filled with black, offensive sewage. Fresh litigation now went on, and legal proceedings were in progress by the

Rural District Council, to obtain an injunction against the Urban District Council, for the Local Board, as such, had ceased to exist at the end of 1894. Several schemes were now proposed in turn; some wished to improve the existing works at a cost of £1,000, to obtain some land below the flood-gates for £1,500, and to carry the effluent thither by an 18-inch carrier, at a cost of £1,349, also to remove the syphon for a sum of £1,000. Another scheme proposed to expend about £2,800 on improving the works, £1,349 for a carrier to a point below the flood-gates, and about £2,000 upon land for irrigation. In August, 1895, the Urban District Council, offered to pay Mr. Stanford £3,000 for ten acres of land, to include costs and damages, the Council to have the control of the flood-gates, and a right of way to the land; this offer was declined. After much discussion, lasting over several months, it began to be clearly seen on all sides that the chemical precipitation and filtration of the sewage was not adapted to a town like Horsham; that the purchase of ten acres of land for £3,000, or even £3,500, would not be of much benefit; and that the best plan would be to purchase the whole of the Broadbridge Estate from Mr. Stanford, whereby the mill and the flood-gates would become the property of the Council, 190 acres of land would be available for any purpose, and all costs and litigation would cease. This purchase of the estate was eventually agreed to in the early part of last summer for the sum of £10,500. The value of the corn-mill and buildings was put down at £1,000 and the timber at £1,000 also, so that the cost of the 190 acres of land was £8,500, or nearly £45 per acre. About 120 acres of this land will be used for irrigation purposes, and the rest can be let, or farmed by the Council. Most of the land is on rising ground with ample slopes in nearly every direction; the sewage will be pumped up the hill, and it will then be distributed over the surface. The history of the various modes of dealing with the sewage of an inland town like Horsham shows the difficulties which are met with, but I think that the best step taken by the Council offers the best solution of the question.

Although the different schemes have cost large sums of money, yet the town has increased in size more rapidly during the last fifteen years than at any former period. With a good water supply and with a good system of drainage, a large number of residents have come into the town, attracted partly by the scenery around, partly by its easy access from London, and in some measure to the school and educational advantages which the place affords

The removal of Christ's Hospital from London to the Stammerham site, near Horsham; will be of much advantage, and the new schools will probably be connected with the Horsham sewage system.

To meet these expenses of purchase of Broadbridge, to extend the water mains to the new portion of the town, and to make various street improvements, it was necessary to hold three public inquiries during the year. There was no appreciable opposition to any of these proposals.

A Local Government Board Inquiry was held on the 23rd of July, 1896, by Colonel W. M. Ducat, R.E., on an application from the Horsham Urban District Council for sanction to borrow £4,500 for purposes of sewage disposal, and £600 for works of street improvement.

A Local Government Board Inquiry was held on the 23rd of September, 1896, by Colonel C. H. Luard, R.E., on an application from the Horsham Urban District Council for sanction to borrow £1,710 for works of water supply.

A Local Government Board Inquiry was held on the 24th of November, 1896, by Mr. W. O. E. Meade-King, M. Inst. C.E., on an application from the Horsham Urban District Council for sanction to borrow £2,090 for purposes of sewerage and sewage disposal.

Pumps, in duplicate, driven by oil engines are being erected in the existing engine house, which has hitherto been used in connection with the chemical treatment of the sewage, and a 12in. pumping main has been laid to the highest point upon the farm.

The sewage, after being rough screened, will be pumped to either a tank constructed at the highest point of the land, or to a second tank at a lower level. At these tanks it will be further screened through coarse gravel, the effluent being led by means of iron pipes to points about the farm where it will run into open carriers whence it can be distributed over the ground.

The sludge which collects in the tanks will run out upon a piece of ground prepared to receive it and will then be trenched in.

It is intended to use the precipitation tanks at the sewage pumping station as collecting tanks for the sewage during the nights and at such times as the pumps are stopped; the pumps being of sufficient capacity to deal with the whole of the twenty-four hours' flow of sewage in eight hours.

The old sand and polarite filter beds will be used as storm overflow tanks.

It will be seen from the foregoing that much of the existing works will be utilized in the new scheme of sewage disposal.

Since control of the flood-gates has been obtained they have been used freely for flushing out the river, with very beneficial results.

Complaints have been made of smells arising from the sewer ventilator covers. The sewer manhole bottoms are flat and this is in part answerable for the nuisance complained of, as the excrementitious matter lodges in the corners and in those parts of the bottom which are out of the current of the sewage. This is being remedied and all new manholes are so constructed that a channel is formed in the bottom of such a depth that if the sewer were running full bore there would be no place in which lodgment of any sort could take place. It is also proposed to erect tall ventilation columns at places where their action will be likely to prove beneficial.

SYSTEMATIC INSPECTION.

New dwelling houses completed and certificated	..	51
New water services laid for domestic use..	..	93
New water services laid for other use ..	..	5

Gallons of water pumped to the Star Reservoir..	59,753,777
Greatest number of gallons pumped in one week (July 8-14)	1,388,250
No. of cases reported to the Council	52
No. of Notices served	8
Insanitary and defective w.c.'s	10
Water closet connected to drain without any trap ..	1
Bell traps replaced by gulley traps	10
Bell traps done away with	2
Insanitary sink	1
Blocked drains	5
Cesspool abolished	1
Pig-keeping nuisances	4
Overcrowding	3
Premises in insanitary condition	1
Smoke nuisance from bakehouse	1
Nuisance caused by burning waste tan	1
Unregistered dairymen	2
Schools disinfected	3
Houses or rooms disinfected	10
Houses inspected where illness was notified	6

RAINFALL.

The following figures have been kindly sent to me by H. Padwick, Esq., M.A., from the observations taken by him at the Manor House, Horsham.

Month.	1894. Fall in Inches.	1895. Fall in Inches.	1896.	
			Fall in Inches.	No. of Rainy Days.
January ..	4.83	2.94	1.07	10
February ..	2.26	0.38	0.45	7
March ..	1.89	2.33	3.49	20
April ..	3.28	2.28	0.41	9
May ..	2.05	0.34	0.35	2
June ..	2.51	0.28	3.05	12
July ..	6.92	3.91	1.81	9
August ..	2.69	3.57	2.42	13
September ..	2.60	0.55	7.41	23
October ..	3.64	4.35	4.77	19
November ..	6.97	7.17	1.95	10
December ..	2.54	3.26	5.83	19
Total ..	42.18	31.36	33.01	153

Year.	Amount in Inches.		No. of Rainy Days.	
1896	33.01	153		
1895	31.36	153		
1894	42.18	189		
1893	25.06	156		
1892	27.53	161		
1891	34.84	178		
1890	25.87	143		

PUBLIC ELEMENTARY SCHOOLS.

There are five Public Elementary Schools which are in a fair condition.

PROCEEDINGS BEFORE THE MAGISTRATES.

No Proceedings were taken before the Magistrates during the year.

COMMON LODGING HOUSES.

There are two Common Lodging Houses, both of which are well kept. One old house was closed during the year.

BAKEHOUSES.

These are twenty-two in number, and they are kept in good sanitary condition.

SLAUGHTER HOUSES.

There are eight Slaughter Houses in the district, and these have been inspected during the year and kept fairly.

COWSHEDS AND DAIRIES.

There are ten Cowsheds and Dairies, but they are nearly all on a small scale. There are twenty-five dairymen and cowkeepers on the register.

INQUESTS.

Inquests were held in eight cases:—Male, 1 day, imperfect expansion of lungs; male, 74 years, fatty degeneration of the heart; male, 6 weeks, suffocated by being overlaid in bed; female, 93 years, accidental fall; male, 30 years, suicide by hanging; male, 54 years, fracture of skull caused by an accidental fall; female, 44 years, fatty degeneration of the heart; male, 22 years, run over and killed on railway.

There were no deaths returned as “not certified” during the year 1896.

HORSHAM URBAN DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the five years, 1892-96.

Year.		At all ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.
1892	...	163	26	20	6	9	42	60
1893	...	161	30	21	10	5	47	48
1894	...	112	14	7	3	3	44	41
1895	...	147	24	21	6	8	43	45
1896	...	126	17	10	8	7	36	48
Total...		709	111	79	33	32	212	212

TABLE 2.—Showing the Deaths from various causes in the five years, 1892-96.

Year.	Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea.	Rheumatic Fever.	Influenza.	Total.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.								
1892	...	—	—	2	—	—	—	—	—	—	—	—	4	3	1	12	22
1893	...	4	—	3	2	—	3	—	—	—	1	1	2	3	—	—	19
1894	...	—	—	2	—	—	—	—	1	—	—	—	—	—	—	4	7
1895	...	—	—	—	—	—	—	—	—	—	—	9	6	3	—	5	23
1896	...	—	—	2	—	—	1	—	—	—	1	3	2	2	—	—	11
Total	...	4	—	9	2	—	4	—	1	—	2	13	14	11	1	21	82

HORSHAM URBAN DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the five years, 1892-96.

PERIOD.	Deaths during the years 1892-96, from					Mean Annual Death-rate per 100,000 living, from					
	Population in middle of Period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
1892	8,260	163	10	11	36	17	1,973	121	134	437	207
1893	8,350	161	19	15	25	13	1,928	227	180	300	156
1894	8,460	112	3	10	12	15	1,324	35	118	142	177
1895	8,580	147	18	11	25	12	1,713	210	128	291	140
1896	8,675	126	11	10	11	21	1,452	127	115	127	242

(A)—Table of DEATHS during the Year 1896, in the HORSHAM

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and up-wards. (h)		Small Pox. (j)	Scarlatina. (k)	Diphtheria. (l)
Horsham Urban District ...	113	17	10	8	6	33	39	Under 5 5 upwards.			2
Horsham Cottage Hospital	2	—	—	—	1	1	—	Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS.....	115	17	10	8	7	34	39	Under 5 5 upwards.			2
The subjoined numbers have also to be taken into											
Deaths occurring outside the District among persons belonging thereto.....	11	—	—	—	—	2	9	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto...								Under 5 5 upwards.			

URBAN DISTRICT, classified according to DISEASES, AGES, and LOCALITIES.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—TABLE OF POPULATION, BIRTHS, AND OF NEW CASES
 Officer of Health, during the year 1896, in the HORSHAM

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICK- COMING TO THE KNOWLEDGE OF					
	Census 1891.	Esti- mated to mid- dle of 1896.			1	2	3	4	5	6
					Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.	
(a)	(b)	(c)	(d)	(e)					Typhus.	Enteric.
Horsham Urban District ...	8,087	8,668	215	Under 5 5 upwards.		3 4	1 6			4
Horsham Cottage Hospital ..	—	7	—	Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
				Under 5 5 upwards.						
TOTALS	8,087	8,675	215	Under 5 5 upwards.		3 4	1 6			4